

Ascent Solar Technologies, Inc.  
Form 10-Q  
August 15, 2016  
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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

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FORM 10-Q

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(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended June 30, 2016

or

TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Transition Period from \_\_\_\_\_ to \_\_\_\_\_

Commission File No. 001-32919

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Ascent Solar Technologies, Inc.  
(Exact name of registrant as specified in its charter)

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Delaware	20-3672603
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

12300 Grant Street, Thornton, CO	80241
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number including area code: 720-872-5000

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Indicate by check mark whether the issuer (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).  Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer  Accelerated filer

Non-accelerated filer  (Do not check if a smaller reporting company) Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

As of August 11, 2016, there were 77,733,441 shares of our common stock issued and outstanding.

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## PART I. FINANCIAL INFORMATION

## Item 1. Condensed Consolidated Financial Statements

ASCENT SOLAR TECHNOLOGIES, INC.  
CONDENSED CONSOLIDATED BALANCE SHEETS  
(Unaudited)

	June 30, 2016	December 31, 2015
<b>ASSETS</b>		
Current Assets:		
Cash and cash equivalents	\$ 131,902	\$ 326,217
Trade receivables, net of allowance for doubtful accounts of \$182,716 and \$60,347, respectively	831,197	1,992,885
Inventories	4,076,521	4,272,380
Prepaid expenses and other current assets	864,275	1,394,780
Total current assets	5,903,895	7,986,262
Property, Plant and Equipment:	37,596,424	37,575,736
Less accumulated depreciation and amortization	(31,206,918 )	(28,484,708 )
	6,389,506	9,091,028
Other Assets:		
Patents, net of amortization of \$203,099 and \$169,626, respectively	1,630,437	1,567,567
Other non-current assets	93,438	105,313
	1,723,875	1,672,880
Total Assets	\$ 14,017,276	\$ 18,750,170
<b>LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY</b>		
Current Liabilities:		
Accounts payable	\$ 3,281,051	\$ 3,625,322
Accrued expenses	1,589,164	1,713,935
Current portion of long-term debt	360,389	348,722
Current portion of convertible note payable, net of discount of \$0 and \$22,484, respectively	—	30,036
September 2015 fixed rate convertible notes, net of discount of \$0 and \$1,237,500, respectively	—	811,773
Promissory Note	530,888	500,493
Current portion of litigation settlement	566,705	541,255
Series E preferred stock, net of discount of \$391,061 and \$1,231,737, respectively	346,331	1,090,847
Series F preferred stock, net of discount of \$129,859 and \$0, respectively	1,467,739	—
Series G preferred stock, net of discount of \$163,333 and \$0, respectively	1,836,667	—
Series H preferred stock, net of discount of \$121,933 and \$0, respectively	503,068	—
Short term embedded derivative liabilities	2,461,593	613,834
Make-whole dividend liability	849,560	849,560
Total current liabilities	13,793,155	10,125,777
Accrued Litigation Settlement, net of current portion	49,644	339,505
Long-Term Debt	5,272,665	5,442,194
Accrued Warranty Liability	235,389	264,000
Commitments and Contingencies (Notes 4 & 17)		
Stockholders' (Deficit) Equity:		

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Series A preferred stock, \$.0001 par value; 750,000 shares authorized and issued; 212,390 shares and 212,390 shares outstanding as of June 30, 2016 and December 31, 2015, respectively (\$2,548,680 Liquidation Preference)	21	21
Common stock, \$0.0001 par value, 450,000,000 shares authorized; 28,010,028 and 7,759,844 shares issued and outstanding, respectively	2,801	776
Additional paid in capital	361,438,859	347,659,691
Accumulated deficit	(366,775,258)	(345,081,794)
Total stockholders' (deficit) equity	(5,333,577 )	2,578,694
Total Liabilities and Stockholders' (Deficit) Equity	\$14,017,276	\$18,750,170

The accompanying notes are an integral part of these condensed consolidated financial statements.

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ASCENT SOLAR TECHNOLOGIES, INC.  
 CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS  
 (Unaudited)

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2016	2015	2016	2015
Revenues	\$255,323	\$2,234,223	\$965,546	\$2,891,863
Costs and Expenses:				
Cost of revenues (exclusive of depreciation shown below)	1,272,510	2,572,218	3,436,906	4,153,711
Research, development and manufacturing operations (exclusive of depreciation shown below)	1,785,349	1,654,674	3,471,766	3,371,061
Selling, general and administrative (exclusive of depreciation shown below)	2,956,848	3,522,694	5,943,695	6,363,493
Depreciation and amortization	1,381,357	1,411,783	2,757,559	2,852,049
Total Costs and Expenses	7,396,064	9,161,369	15,609,926	16,740,314
Loss from Operations	(7,140,741 )	(6,927,146 )	(14,644,380 )	(13,848,451 )
Other Income/(Expense)				
Other Income/(Expense), net	32,333	16,836	32,333	34,689
Interest expense	(1,404,853 )	(5,256,532 )	(3,652,991 )	(15,208,292 )
Deemed interest expense on warrant liability	—	—	—	(909,092 )
Change in fair value of derivatives and gain/(loss) on extinguishment of liabilities, net	(2,655,190 )	829,166	(3,428,426 )	805,700
Total Other Income/(Expense)	(4,027,710 )	(4,410,530 )	(7,049,084 )	(15,276,995 )
Net Loss	\$(11,168,451)	\$(11,337,676)	\$(21,693,464)	\$(29,125,446)
Net Loss Per Share (Basic and diluted)	\$ (0.68 )	\$ (7.32 )	\$ (1.66 )	\$ (21.76 )
Weighted Average Common Shares Outstanding (Basic and diluted)	16,364,931	1,549,697	13,042,347	1,338,195

The accompanying notes are an integral part of these condensed consolidated financial statements.

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ASCENT SOLAR TECHNOLOGIES, INC.  
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS  
(Unaudited)

	Six Months Ended	
	June 30,	
	2016	2015
Operating Activities:		
Net loss	\$(21,693,465)	\$(29,125,446)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	2,757,559	2,852,049
Share based compensation	557,980	457,500
Amortization of financing costs to interest expense	104,679	243,882
Non-cash interest expense	206,845	1,065,780
Amortization of debt discount	3,006,096	13,497,788
Accrued litigation settlement	(264,411)	(241,195)
Deemed interest expense on warrant liability	—	909,092
Change in fair value of derivatives and gain/(loss) on extinguishment of liabilities, net	3,428,426	(805,700)
Bad debt expense	182,716	82,553
Changes in operating assets and liabilities:		
Accounts receivable	978,972	743,259
Inventories	195,859	(2,390,242)
Prepaid expenses and other current assets	475,827	722,155
Accounts payable	(344,269)	210,174
Accrued expenses	(124,771)	(733,205)
Warranty reserve	(28,611)	48,000
Net cash used in operating activities	(10,560,568)	(12,463,556)
Investing Activities:		
Purchase of property, plant and equipment	(20,688)	(29,194)
Interest income on restricted cash	—	(34,689)
Patent activity costs	(96,344)	(163,325)
Net cash used in investing activities	(117,032)	(227,208)
Financing Activities:		
Payment of debt financing costs	(40,000)	(270,000)
Repayment of debt	(157,862)	(123,508)
Changes in restricted cash	—	6,000,000
Proceeds from Committed Equity Line	1,056,147	—
Proceeds from issuance of stock and warrants	9,625,000	4,000,000
Net cash provided by financing activities	10,483,285	9,606,492
Net change in cash and cash equivalents	(194,315)	(3,084,272)
Cash and cash equivalents at beginning of period	326,217	3,316,576
Cash and cash equivalents at end of period	\$131,902	\$232,304
Supplemental Cash Flow Information:		
Cash paid for interest	\$192,532	\$224,300
Non-Cash Transactions:		
Non-cash conversions of preferred stock and convertible notes to equity	\$7,040,115	\$7,745,950

The accompanying notes are an integral part of these condensed consolidated financial statements.



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ASCENT SOLAR TECHNOLOGIES, INC.  
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS  
(Unaudited)

NOTE 1. ORGANIZATION

Ascent Solar Technologies, Inc. ("Ascent") was incorporated on October 18, 2005 from the separation by ITN Energy Systems, Inc. ("ITN") of its Advanced Photovoltaic Division and all of that division's key personnel and core technologies. ITN, a private company incorporated in 1994, is an incubator dedicated to the development of thin-film, photovoltaic ("PV"), battery, fuel cell and nano technologies. Through its work on research and development contracts for private and governmental entities, ITN developed proprietary processing and manufacturing know-how applicable to PV products generally, and to Copper-Indium-Gallium-diSelenide ("CIGS") PV products in particular. ITN formed Ascent to commercialize its investment in CIGS PV technologies. In January 2006, in exchange for 5,140 shares of common stock of Ascent, ITN assigned to Ascent certain CIGS PV technologies and trade secrets and granted to Ascent a perpetual, exclusive, royalty-free worldwide license to use, in connection with the manufacture, development, marketing and commercialization of CIGS PV to produce solar power, certain of ITN's existing and future proprietary and control technologies that, although non-specific to CIGS PV, Ascent believes will be useful in its production of PV modules for its target markets. Upon receipt of the necessary government approvals and pursuant to novation in early 2007, ITN assigned government-funded research and development contracts to Ascent and also transferred the key personnel working on the contracts to Ascent.

Currently, the Company is producing consumer oriented products focusing on charging mobile devices powered by or enhanced by the Company's solar modules. Products in these markets are priced based on the overall product value proposition rather than a commodity-style price per watt basis. The Company continues to develop new consumer products and has adjusted utilization of its equipment to meet near term sales forecasts.

Reverse Stock Split

On May 26, 2016, the Company, a Delaware corporation, filed a Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Company (the "Certificate of Amendment") with the Secretary of State of the State of Delaware to effect a reverse stock split of the Company's common stock, par value \$0.0001 per share at a ratio of one-for-twenty (the "Reverse Stock Split"). The Certificate of Amendment did not change the number of authorized shares, or the par value, of the Company's common stock. The Certificate of Amendment provides that every twenty shares of the Company's issued and outstanding common stock were automatically combined into one issued and outstanding share of the Company's common stock. All shares and per share amounts in the condensed financial statements and accompanying notes have been retroactively adjusted to give effect to the Reverse Stock Split.

NOTE 2. BASIS OF PRESENTATION

The accompanying condensed consolidated financial statements have been derived from the accounting records of Ascent Solar Technologies, Inc., Ascent Solar (Asia) Pte. Ltd., and Ascent Solar (Shenzhen) Co., Ltd. (collectively, "the Company") as of June 30, 2016 and December 31, 2015, and the results of operations for the three and six months ended June 30, 2016 and 2015. Ascent Solar (Shenzhen) Co., Ltd. is wholly owned by Ascent Solar (Asia) Pte. Ltd., which is wholly owned by Ascent Solar Technologies, Inc. All significant inter-company balances and transactions have been eliminated in the accompanying condensed consolidated financial statements.

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") for interim financial information and in accordance with the instructions to Form 10-Q and Article 8 of Regulation S-X. Accordingly, these interim financial statements do not include all of the information and footnotes typically found in U.S. GAAP audited annual financial statements. In the opinion of management, all adjustments (consisting only of normal recurring adjustments) considered necessary for a fair statement have been included. The Condensed Consolidated Balance



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Sheet at December 31, 2015 has been derived from the audited financial statements as of that date but does not include all of the information and footnotes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2015. These condensed consolidated financial statements and notes should be read in conjunction with the financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2015.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could

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differ from those estimates. Operating results for the six months ended June 30, 2016 are not necessarily indicative of the results that may be expected for the year ending December 31, 2016.

**NOTE 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

The Company's significant accounting policies were described in Note 3 to the audited financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2015. There have been no significant changes to our accounting policies as of June 30, 2016.

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606). The update will establish a comprehensive revenue recognition standard for virtually all industries in GAAP. ASU 2014-09 will change the amount and timing of revenue and cost recognition, implementation, disclosures and documentation. In August 2015, the FASB issued ASU No. 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of Effective Date. The amendments in ASU 2015-14 defer the effective date of ASU 2014-09 for all entities by one year. ASU 2014-09 is now effective for the Company in fiscal year 2018. The Company is researching whether the adoption of ASU 2014-09 will have a material effect on the Company's consolidated financial statements.

In August 2014, the FASB issued ASU No. 2014-15, Presentation of Financial Statements—Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern. ASU 2014-15 requires management to evaluate, in connection with preparing financial statements for each annual and interim reporting period, whether there are conditions or events, considered in the aggregate, that raise substantial doubt about an entity's ability to continue as a going concern within one year after the date that the financial statements are issued and to provide certain disclosures if it concludes that substantial doubt exists. ASU 2014-15 is effective for all entities for the annual period ending after December 15, 2016, and for annual and interim periods thereafter, with early adoption permitted. The Company has not early adopted ASU 2014-15. The Company is researching whether the adoption of ASU 2014-15 will have a material effect on the Company's consolidated financial statements.

In July 2015, the FASB issued ASU No. 2015-11, Inventory (Topic 330): Simplifying the Measurement of Inventory, which states that inventory should be measured at the lower of cost and net realizable value. Net realizable value is defined as estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. This ASU is effective within annual periods beginning on or after December 15, 2016, including interim periods within that reporting period. The Company is currently evaluating the impact, if any, that the adoption of this guidance will have on its consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). ASU 2016-02 requires lessees to recognize all leases, including operating leases, on the balance sheet as a lease asset or lease liability, unless the lease is a short-term lease. ASU 2016-02 also requires additional disclosures regarding leasing arrangements. ASU 2016-02 is effective for interim periods and fiscal years beginning after December 15, 2018, and early application is permitted. The Company is currently evaluating the impact, if any, that the adoption of this guidance will have on its consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, Improvements to Employee Share-Based Payment Accounting, which simplifies several aspects of the accounting for share-based payment transactions, including 1) accounting for income taxes, 2) classification of excess tax benefits in the statement of cash flows, 3) forfeitures, 4) minimum statutory tax withholding requirements, 5) cash flow classification of employee taxes withheld in the form of shares, 6) the practical expedient for estimating the expected term, and 7) intrinsic value. The guidance is effective for annual reporting periods beginning after December 15, 2016, and interim periods within those annual periods. The Company does not expect the implementation of ASU 2016-09 to have a material effect on its consolidated financial statements.

Reclassifications: Certain reclassifications have been made to the 2015 financial information to conform to the 2016 presentation. Such reclassifications had no effect on the net loss.

#### NOTE 4. LIQUIDITY AND CONTINUED OPERATIONS

On September 4, 2015, the Company entered into a note purchase agreement between the Company and two accredited investors (the “Accredited Investors”). Pursuant to the note purchase agreement, the Company issued to the Accredited Investors \$1.5 million original principal amount of secured subordinated convertible notes on September 4, 2015, and an additional \$0.5 million original principal amount of secured subordinated convertible notes on September 28, 2015. On April 29, 2016, the Company entered into Exchange Agreements (the “Exchange Agreements”), with the Accredited Investors to cancel the September 2015 Convertible Notes. Additionally, on April 29, 2016, the Company entered into a securities purchase

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agreements with the Accredited Investors for the private placement of \$2.0 million of the Company's newly designated Series G Convertible Preferred Stock ("Series G Preferred Stock"). See Note 10 for further information.

On November 4, 2015, the Company entered into a securities purchase agreement with a private investor (the "Private Investor") to issue 2,800 shares of Series E Preferred Stock in exchange for \$2.8 million. See Note 11 for further information.

On November 10, 2015, the Company and the Private Investor entered into a committed equity line purchase agreement (the "CEL"). Under the terms and subject to the conditions of the CEL purchase agreement, at its option, the Company has the right to sell to the Private Investor, and the Private Investor is obligated to purchase from the Company, up to \$32.2 million of the Company's common stock, subject to certain limitations, from time to time, over the 36-month period commencing on December 18, 2015, the date that the registration statement was declared effective by the SEC. The remaining availability under the CEL as of June 30, 2016 is \$29.1 million.

Actual sales of shares of common stock to the Private Investor under the CEL purchase agreement will depend on a variety of factors to be determined by the Company from time to time, including, among others, our ability to register shares of common stock with the SEC, market conditions, the trading price of the common stock and determinations by the Company as to the appropriate sources of funding for the Company and its operations.

As of January 27, 2016, the Company was not able to access the CEL because the Company does not have any registered shares available for use in connection with the CEL purchase agreement. The Company is in the process of registering an additional 2,400,000 shares for such purpose with the SEC. If such additional registration statement is declared effective by the SEC and such additional shares become available for use by the Company, the Company's sales of shares pursuant to the CEL purchase agreement during 2016 would be limited to such 2,400,000 shares. The Company's use of the CEL in 2016 and beyond would require, among other things, the Company to file additional registration statements in the future that cover additional shares and have such registration statements declared effective. The Company would also need to maintain the effectiveness of such additional registration statements.

On January 19, 2016, the Company entered into a securities purchase agreement (the "Series F SPA") with the Private Investor for the sale of \$7 million of the Company's newly designated Series F 7% Convertible Preferred Stock (the "Series F Preferred Stock"). See Note 12 for further information.

On June 9, 2016, the Company entered into a securities purchase agreement (the "Series H SPA") with the Private Investor for the sale of up to \$2.5 million of the Company's newly designated Series H 7% Convertible Preferred Stock (the "Series H Preferred Stock"). However, subsequent to June 30, 2016, the Company entered into an exchange agreement to cancel the Series H Preferred Stock. See Note 13 and Note 18 for further information.

The Company has continued PV production at its manufacturing facility. The Company does not expect that sales revenue and cash flows will be sufficient to support operations and cash requirements until it has fully implemented its new consumer products strategy. During the six months ended June 30, 2016 the Company used \$10.6 million in cash for operations. The Company's primary significant long term cash obligation consists of a note payable of \$5.6 million to a financial institution secured by a mortgage on its headquarters and manufacturing building in Thornton, Colorado. Total payments of \$0.4 million, including principal and interest, will come due in the remainder of 2016. The Company also owes \$0.6 million as of June 30, 2016 related to a litigation settlement reached in April 2014, which is being paid in equal installments over 40 months which began in April 2014.

Additional projected product revenues are not anticipated to result in a positive cash flow position for the year 2016 overall and, as of June 30, 2016, the Company has negative working capital. As such, cash liquidity sufficient for the year ending December 31, 2016 will require additional financing. Subsequent to June 30, 2016, on July 13, 2016, the

Company entered into a securities purchase agreement with the Private Investor for the private placement of up to \$2,080,000 of the Company's 4% Original Issue Discount Senior Secured Convertible Promissory Notes. See Note 18 for further information.

The Company continues to accelerate sales and marketing efforts related to its consumer products strategy through increased hiring and expansion of its sales channel. The Company has begun activities related to securing additional financing through strategic or financial investors, but there is no assurance the Company will be able to raise additional capital on acceptable terms or at all. If the Company's revenues do not increase rapidly, and/or additional financing is not obtained, the Company will be required to significantly curtail operations to reduce costs and/or sell assets. Such actions would likely have an adverse impact on the Company's future operations.

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## NOTE 5. PROPERTY, PLANT AND EQUIPMENT

The following table summarizes property, plant and equipment as of June 30, 2016 and December 31, 2015:

	As of June 30, 2016	As of December 31, 2015
Building	\$5,828,960	\$ 5,828,960
Furniture, fixtures, computer hardware and computer software	480,976	480,976
Manufacturing machinery and equipment	31,265,800	31,265,800
Net depreciable property, plant and equipment	37,575,736	37,575,736
Manufacturing machinery and equipment in progress	20,688	—
Property, plant and equipment	37,596,424	37,575,736
Less: Accumulated depreciation and amortization	(31,206,918)	(28,484,708 )
Net property, plant and equipment	\$6,389,506	\$ 9,091,028

The Company analyzes its long-lived assets for impairment, both individually and as a group, whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable.

Depreciation expense for the three months ended June 30, 2016 and 2015 was \$1,359,492 and \$1,401,003, respectively. Depreciation expense for the six months ended June 30, 2016 and 2015 was \$2,722,210 and \$2,830,490, respectively. Depreciation expense is recorded under “Depreciation and amortization expense” in the Condensed Consolidated Statements of Operations.

## NOTE 6. INVENTORIES

Inventories consisted of the following at June 30, 2016 and December 31, 2015:

	As of June 30, 2016	As of December 31, 2015
Raw materials	\$833,181	\$925,064
Work in process	696,915	671,746
Finished goods	2,546,425	2,675,570
Total	\$4,076,521	\$4,272,380

## NOTE 7. DEBT

On February 8, 2008, the Company acquired a manufacturing and office facility in Thornton, Colorado, for approximately \$5.5 million. The purchase was financed by a promissory note, deed of trust and construction loan agreement (the “Construction Loan”) with the Colorado Housing and Finance Authority (“CHFA”), which provided the Company borrowing availability of up to \$7.5 million for the building and building improvements. In 2009, the Construction Loan was converted to a permanent loan pursuant to a Loan Modification Agreement between the Company and CHFA (the “Permanent Loan”). The Permanent Loan, collateralized by the building, has an interest rate of 6.6% and the principal will be amortized through its term to January 2028. Further, pursuant to certain negative covenants in the Permanent Loan, the Company may not, among other things, without CHFA’s prior written consent (which by the terms of the deed of trust is subject to a reasonableness requirement): create or incur additional indebtedness (other than obligations created or incurred in the ordinary course of business); merge or consolidate with any other entity; or make loans or advances to the Company’s officers, shareholders, directors or employees. The outstanding balance of the Permanent Loan was \$5,633,054 as of June 30, 2016.

The Company is currently not in compliance with certain covenants under the terms of the Permanent Loan as a result of a late real-estate tax payment due to Adams County in the amount of approximately \$177,000 plus accrued interest. Under the terms of the Permanent Loan, CHFA may accelerate payments due under the Permanent Loan, take possession of the premises or require future real-estate taxes be paid in monthly installments to CHFA. The Company is currently in communication with CHFA to explore all possible options to cure the covenant breach.

As of June 30, 2016, future principal payments on long-term debt are due as follows:

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2016	\$ 190,860
2017	344,730
2018	368,183
2019	393,232
2020	419,985
Thereafter	3,916,064
	\$ 5,633,054

**NOTE 8. MAKE-WHOLE DIVIDEND LIABILITY**

In June 2013, the Company entered into a Series A Preferred Stock Purchase Agreement. Holders of Series A Preferred Stock are entitled to cumulative dividends at a rate of 8.0% per annum, with the dividend rate being indexed to the Company's stock price and subject to adjustment. Conversion or redemption of the Series A Preferred Stock within 4 years of issuance requires the Company pay a make-whole dividend to the holders, whereby dividends for the full four year period are to be paid in cash or common stock (valued at 10% below market price).

The Company concluded the make-whole dividends should be characterized as embedded derivatives under ASC 815. The make-whole dividends were expensed at the time of issuance and recorded as "Make-whole dividend liability" in the Condensed Consolidated Balance Sheets.

The fair value of these dividend liabilities, which are indexed to the Company's common stock, must be evaluated at each period end. The fair value measurements rely primarily on Company-specific inputs and the Company's own assumptions. With the absence of observable inputs, the Company determined these recurring fair value measurements reside primarily within Level 3 of the fair value hierarchy. The fair value determination required forecasting stock price volatility, expected average annual return and conversion date. During the six months ended June 30, 2016, there was no change in the fair value of the make-whole liability from the fair value at December 31, 2015.

At June 30, 2016, there were 212,390 shares of Series A outstanding. At June 30, 2016, the Company was entitled to redeem the outstanding Series A preferred shares for \$1.7 million, plus a make-whole amount of \$0.8 million, payable in cash or common shares. The fair value of the make-whole dividend liabilities for the Series A preferred shares, which approximates cash value, was \$0.8 million as of June 30, 2016.

**NOTE 9. CONVERTIBLE NOTE AND SERIES D PREFERRED STOCK****Convertible Note and Series D Preferred Stock**

On November 14, 2014, the Company entered into a securities purchase agreement (the "November 2014 Purchase Agreement") with one institutional and accredited investor (the "Investor"). Pursuant to the terms of the November 2014 Purchase Agreement, the Company sold to the Investor (i) \$3,000,000 (3,000 shares) of Series D Convertible Preferred Stock (the "Series D Preferred Stock"), and (ii) \$32,000,000 original principal amount of senior secured convertible notes (the "Notes"). The Series D Preferred Stock was fully converted as of June 30, 2015. On September 4, 2015, the Company entered into a Cancellation and Waiver Agreement (the "Cancellation Agreement"), between the Company and the Investor to retire the Notes. The Cancellation Agreement was amended on October 8, 2015 and November 22, 2015. As of December 31, 2015 the total Notes outstanding balance was \$52,520 and there was a corresponding embedded derivative liability valued at \$60,984.

The Investor had available to them a new conversion price beginning on November 4, 2015 as a result of the Series E Preferred Stock transaction further described in Note 11. The Investor could elect to convert a portion of the Notes into shares of common stock using a conversion price equal to 80% of the average of the two lowest volume weighted average prices ("VWAP") of our common stock for the ten consecutive trading day period prior to each specific



conversion date (the "Variable Price"). During the six months ended June 30, 2016, the Investor elected to convert the remaining Notes outstanding balance of \$52,520 using the Variable Price, resulting in the issuance of 48,993 shares of common stock. The Company paid interest in the amount of \$266 on the Notes, resulting in the issuance of 248 shares of common stock during the six months ended June 30, 2016.

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A net gain on extinguishment of \$54,681 was recorded to "Change in fair value of derivatives and gain/(loss) on extinguishment of liabilities, net" in the Condensed Consolidated Statements of Operations for the six months ended June 30, 2016 as a result of the final conversion of the Notes.

NOTE 10. SEPTEMBER 2015 CONVERTIBLE NOTES AND SERIES G PREFERRED STOCK

September 2015 Convertible Notes Extinguishment

On September 4, 2015, the Company entered into a note purchase agreement between the Company and the Accredited Investors. Pursuant to the note purchase agreement, the Company issued to the Accredited Investors \$1.5 million original principal amount of secured subordinated convertible notes on September 4, 2015, and an additional \$0.5 million original principal amount of secured subordinated convertible notes on September 28, 2015 (collectively, the "September 2015 Convertible Notes"). The September 2015 Convertible Notes bear interest at a rate of 8% per annum.

All amounts due under the September 2015 Convertible Notes were convertible at any time, in whole or in part, at the option of the Accredited Investors, into shares of Common Stock at a fixed conversion price, which was subject to adjustment for stock splits, stock dividends, combinations or similar events, of \$2.40 per share (the "Conversion Price"). The Company, however, was prohibited from issuing shares of Common Stock pursuant to the September 2015 Convertible Notes unless stockholder approval of such issuance of securities was obtained as required by applicable NASDAQ listing rules. The Company received stockholder approval of such share issuances at a special stockholders meeting held on December 18, 2015. This provision resulted in a contingent beneficial conversion feature that was recognized once the contingency was resolved based on its intrinsic value at the commitment date. Accordingly, a beneficial conversion feature in the amount of \$1.38 million was recorded as a debt discount on December 18, 2015. The debt discount was recognized as additional interest expense over the life of the September 2015 Convertible Notes.

There were no registration rights applicable to the September 2015 Convertible Notes. Accordingly, any shares of Common Stock issued upon conversion of the September 2015 Convertible Notes would be restricted and could only be sold in compliance with Rule 144 or in accordance with another exemption from registration.

On April 29, 2016, the Company entered into Exchange Agreements (the "Exchange Agreements") with the Accredited Investors. Under the terms of the Exchange Agreements, the September 2015 Convertible Notes (approximately \$2.10 million of outstanding principal and accrued interest) were cancelled. In exchange, the Company has issued to the Accredited Investors rights to receive a fixed number of shares of common stock of the Company in accordance with the terms of Rights to Receive Common Stock dated April 29, 2016 (the "April 2016 Rights"). The April 2016 Rights obligate the Company to issue to the holders (without the payment of any additional consideration) an aggregate of approximately 2.10 million shares of common stock (the "April 2016 Rights Shares"). The number of April 2016 Rights Shares is fixed, and is only subject to customary non-price based ratable adjustments. The April 2016 Rights are immediately exercisable and expire on April 29, 2021.

A net loss on extinguishment of \$0.89 million was recorded to "Change in fair value of derivatives and gain/(loss) on extinguishment of liabilities, net" in the Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2016 as a result of the cancellation of the September 2015 Convertible Notes and issuance of the April 2016 Rights. During the three months ended June 30, 2016, the Accredited Investors exercised their April 2016 Rights to receive and the Company has delivered 1,552,865 shares of common stock.

Series G Convertible Preferred Stock Financing

On April 29, 2016, the Company entered into securities purchase agreements with the Accredited Investors for the private placement of \$2,000,000 of the Company's newly designated Series G Preferred Stock. The Company issued a total of 500 shares of Series G Preferred Stock to the Accredited Investors in exchange for \$500,000 at closing. The Company sold an additional 1,500 shares of Series G Preferred Stock to the Accredited Investors during the months of May and June 2016, which resulted in additional gross proceeds to the Company of \$1,500,000.

Shares of the Series G Preferred Stock (including the amount of any accrued and unpaid dividends thereon) will be convertible at the option of the Accredited Investors into common stock at a fixed conversion price of \$1.00 per share. Holders of the Series G Preferred Stock will be entitled to dividends in the amount of 10% per annum. One year after issuance, the Company is required to redeem for cash all or any portion of the outstanding shares of the Series G Preferred Stock at a price per share equal to \$1,000 plus any accrued but unpaid dividends thereon. Except as otherwise required by law (or with respect to approval of certain actions), the Series G Preferred Stock does not have voting rights.

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A beneficial conversion feature in the amount of \$196,000 was recorded as a debt discount. The debt discount will be recognized as additional interest expense over the life of the Series G Preferred Stock.

There are no registration rights applicable to the Series G Preferred Stock. Accordingly, any shares of Common Stock issued upon conversion of the Series G Preferred Stock are restricted and can only be sold in compliance with Rule 144 or in accordance with another exemption from registration.

NOTE 11. SERIES E PREFERRED STOCK

On November 4, 2015, the Company entered into a securities purchase agreement with the Private Investor to issue 2,800 shares of Series E Preferred Stock to an investor in exchange for \$2,800,000. The proceeds were fully received upon effectiveness of the Company's registration statement covering the re-sale of the common stock underlying the Series E Preferred Stock in December of 2015.

Shares of the Series E Preferred Stock (including the amount of any accrued and unpaid dividends thereon) are convertible, at the option of the holder, into common stock at a variable conversion price equal to 80% of the average of the two lowest VWAPs of the Company's common stock for the ten consecutive trading day period prior to the conversion date. If certain defined default events occur, the conversion price would thereafter be reduced (and only reduced), to equal 70% of the average of the two lowest VWAPs of the Company's common stock for the twenty consecutive trading day period prior to the conversion date. The Private Investor had available to them a new conversion price beginning on June 9, 2016 as a result of the Series H Preferred Stock transaction further described in Note 13. Shares of the Series E Preferred Stock are now convertible, at the option of the Private Investor, into common stock at a variable conversion price equal to 70% of (i) the lowest VWAP of our common stock for the ten consecutive trading day period prior to the conversion date or (ii) the lowest closing bid price of our common stock for the ten consecutive trading day period prior to the conversion date. During the six months ended June 30, 2016, the Private Investor exercised its option to convert 1,585 Series E Preferred Shares, representing a value of \$1,585,193, resulting in the issuance of 8,749,791 shares of common stock.

Holders of the Series E Preferred Stock will be entitled to dividends in the amount of 7% per annum. During the six months ended June 30, 2016, the Company paid dividends in the amount of \$35,657 on the Series E Preferred Stock, resulting in the issuance of 361,778 shares of common stock.

The Company has issued 18,000 shares of common stock to the Private Investor as a commitment fee relating to the Series E Preferred Stock. Costs associated with the Series E Preferred Stock, such as legal fees and commitment shares are capitalized and reported as deferred financing costs on the Condensed Consolidated Balance Sheets. The total gross debt issuance cost incurred by the Company related to the Series E Preferred Stock was \$104,000. These debt issuance costs will be recognized as additional interest expense over the life of the Series E Preferred Stock.

At any time after March 31, 2016, the Private Investor has the option to redeem for cash all or any portion of the outstanding shares of the Series E Preferred Stock at a price per share equal to \$1,250 plus any accrued but unpaid dividends thereon.

At any time after the third anniversary of the date of the initial issuance of Series E Preferred Stock, the Company will have the option to redeem for cash all outstanding shares of the Series E Preferred Stock at a price per share equal to \$1,250 plus any accrued but unpaid dividends thereon.

The Company classified the Series E Preferred Stock as a liability pursuant to ASC 480 on the closing date due to the structure of the financing agreement, whereby the Company has an unconditional obligation that the Company may settle by issuing a variable number of common shares with a monetary value that is fixed and known at inception.

There are 737 shares of Series E Preferred Stock outstanding as of June 30, 2016.

Pursuant to a number of factors outlined in ASC Topic 815, Derivatives and Hedging, the conversion option in the Series E Preferred Stock was deemed to include an embedded derivative that required bifurcation and separate accounting. As such, the Company ascertained the value of the conversion option as if separate from the convertible issuance and appropriately recorded that value as a derivative liability. At December 31, 2015, the derivative liability associated with the Series E Preferred Stock was \$553,000.

The derivative liability associated with the Series E Preferred Stock is subject to revaluation on a quarterly basis to reflect the market value change of the embedded conversion option. At June 30, 2016, the Company conducted a fair value assessment of the embedded derivative associated with the Series E Preferred Stock. As a result of the fair value assessment, the Company

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recorded a \$43,000 loss as "Change in fair value of derivatives and gain/(loss) on extinguishment of liabilities, net" in the Condensed Consolidated Statements of Operations to properly reflect the fair value of the embedded derivative of \$596,000 as of June 30, 2016.

The derivative associated with the Series E Preferred Stock approximates management's estimate of the fair value of the embedded derivative liability at June 30, 2016 based on using a Monte Carlo simulation following a Geometric Brownian Motion with the following assumptions: annual volatility of 76%, present value discount rate of 12% and dividend yield of 0%.

NOTE 12. SERIES F PREFERRED STOCK

On January 19, 2016, the Company entered into a securities purchase agreement (the "Series F SPA") with the Private Investor for the sale of \$7,000,000 of the Company's newly designated Series F 7% Convertible Preferred Stock (the "Series F Preferred Stock").

On January 20, 2016, the Company sold and issued 7,000 shares of Series F Preferred Stock to the Private Investor. The aggregate purchase price of the Series F Preferred was \$7,000,000. On January 20, 2016, the Private Investor paid \$500,000 to the Company. The remaining \$6,500,000 was paid by the Private Investor to the Company in 14 weekly increments of \$500,000 or \$250,000 beginning January 25, 2016 and ending April 28, 2016.

Holders of the Series F Preferred Stock are entitled to dividends in the amount of 7% per annum. During the quarter ended June 30, 2016, the Company paid dividends in the amount of \$86,827 on the Series F Preferred Stock, resulting in the issuance of 170,825 shares of common stock.

Shares of the Series F Preferred Stock (including the amount of any accrued and unpaid dividends thereon) are convertible, at the option of the holder, into common stock at a fixed conversion price equal to \$5.00 per share. If certain defined default events occur, the conversion price would thereafter be reduced (and only reduced), to equal 70% of the average of the two lowest VWAPs of our common stock for the twenty consecutive trading day period prior to the conversion date.

If requested by the Private Investor, the Company will make weekly redemptions of shares of Series F Preferred Stock (including any accrued and unpaid dividends thereon). If the redemption price is paid by the Company in cash, the number of shares to be redeemed in each weekly increment is 250 shares of Series F Preferred Stock, and the redemption price is a price per share equal to \$1,250 plus any accrued but unpaid dividends thereon. The Company has the option to make such redemption payments in shares of common stock provided certain specified equity conditions are satisfied at the time of payment. The number of shares of common stock to be issued would be calculated using a per share price equal to 80% of the one lowest VWAP of our common stock for the ten consecutive trading day period prior to the payment date. For redemption payments made in shares of common stock, the Company will redeem either (i) 250 shares of Series F Preferred Stock or (ii) such greater number of shares of Series F Preferred Stock (and also including any accrued and unpaid dividends) that would result upon redemption in the issuance of a number of shares of common stock equal to 12% of the aggregate composite trading volume for the Company's common stock during the preceding calendar week.

The Private Investor had available to them a new conversion price beginning on June 9, 2016 as a result of the Series H Preferred Stock transaction further described in Note 13. Shares of the Series F Preferred Stock are now convertible, at the option of the Private Investor, into common stock at a variable conversion price equal to 70% of (i) the lowest VWAP of our common stock for the ten consecutive trading day period prior to the conversion date or (ii) the lowest closing bid price of our common stock for the ten consecutive trading day period prior to the conversion date. During the quarter ended June 30, 2016 the Private Investor exercised its option to convert 5,402 Series F Preferred Shares,

representing a value of \$5.40 million, resulting in the issuance of 8,662,908 shares of common stock.

The Company classified the Series F Preferred Stock as a liability pursuant to ASC 480 on the closing date due to the structure of the financing agreement, whereby the Company has an unconditional obligation that the Company may settle by issuing a variable number of common shares with a monetary value that is fixed and known at inception. There are 1,598 shares of Series F Preferred Stock outstanding as of June 30, 2016.

Pursuant to a number of factors outlined in ASC Topic 815, Derivatives and Hedging, the conversion option in the Series F Preferred Stock was deemed to include an embedded derivative that required bifurcation and separate accounting. As such, the Company ascertained the value of the conversion option as if separate from the convertible issuance and appropriately recorded that value as a derivative liability. At closing, a derivative liability and a corresponding debt discount in the amount of \$1,666,000 were recorded. The debt discount will be charged to interest expense ratably over the life of the Series F Preferred Stock.

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The derivative liability associated with the Series F Preferred Stock is subject to revaluation on a quarterly basis to reflect the market value change of the embedded conversion option. At June 30, 2016, the Company conducted a fair value assessment of the embedded derivative associated with the Series F Preferred Stock. As a result of the fair value assessment, the Company recorded a \$545,000 gain as "Change in fair value of derivatives and gain/(loss) on extinguishment of liabilities, net" in the Condensed Consolidated Statements of Operations to properly reflect the fair value of the embedded derivative of \$1,121,000 as of June 30, 2016.

The derivative associated with the Series F Preferred Stock approximates management's estimate of the fair value of the embedded derivative liability at June 30, 2016 based on using a Monte Carlo simulation following a Geometric Brownian Motion with the following assumptions: annual volatility of 76%, present value discount rate of 12% and dividend yield of 0%.

NOTE 13. SERIES H PREFERRED STOCK

On June 9, 2016, the Company entered into a securities purchase agreement with the Private Investor for the sale of up to \$2.5 million of the Company's newly designated Series H7% Convertible Preferred Stock. On June 9, 2016 the Company sold and issued 250 shares of Series H Preferred Stock to the Private Investor in exchange for \$250,000, on June 27, 2016 the Company sold and issued 250 shares of Series H Preferred Stock to the Private Investor in exchange for \$250,000, and on June 29, 2016, the Company sold and issued 125 shares of Series H Preferred Stock to the Private Investor in exchange for \$125,000.

Shares of the Series H Preferred Stock (including the amount of any accrued and unpaid dividends thereon) will be convertible at the option of the holder into common stock at a variable conversion price equal to 70% of (i) the lowest volume weighted average price ("VWAP") of our common stock for the ten consecutive trading day period prior to the conversion date or (ii) the lowest closing bid price of our common stock for the ten consecutive trading day period prior to the conversion date. If certain "Triggering Events" occur, then the conversion price would thereafter be reduced (and only reduced), to equal 60% of the average of the two lowest VWAPs of our common stock for the twenty consecutive trading day period prior to the conversion date. In no event, however, shall the conversion price be less than \$0.005 per share. The Private Investor did not convert any shares of Series H Preferred Stock into shares of common stock during the quarter ended June 30, 2016.

Holders of the Series H Preferred Stock are entitled to dividends in the amount of 7% per annum.

At any time after the occurrence of certain defined "Triggering Events", the holder will have the option to redeem for cash all or any portion of the outstanding shares of the Series H Preferred Stock at a price per share equal to \$1,250 plus any accrued but unpaid dividends thereon. At any time after the third anniversary of the date of the initial issuance of Series H Preferred Stock, the Company will have the option to redeem for cash all outstanding shares of the Series H Preferred Stock at a price per share equal to \$1,250 plus any accrued but unpaid dividends thereon.

The Company classified the Series H Preferred Stock as a liability pursuant to ASC 480 on the closing date due to the structure of the financing agreement, whereby the Company has an unconditional obligation that the Company may settle by issuing a variable number of common shares with a monetary value that is fixed and known at inception. There are 625 shares of Series H Preferred Stock outstanding as of June 30, 2016.

Pursuant to a number of factors outlined in ASC Topic 815, Derivatives and Hedging, the conversion option in the Series H Preferred Stock was deemed to include an embedded derivative that required bifurcation and separate accounting. As such, the Company ascertained the value of the conversion option as if separate from the convertible issuance and appropriately recorded that value as a derivative liability. At closing, a derivative liability and a



corresponding debt discount in the amount of \$146,000 were recorded. The debt discount will be charged to interest expense ratably over the life of the Series H Preferred Stock.

The derivative liability associated with the Series H Preferred Stock is subject to revaluation on a quarterly basis to reflect the market value change of the embedded conversion option. At June 30, 2016, the Company conducted a fair value assessment of the embedded derivative associated with the Series H Preferred Stock. As a result of the fair value assessment, the Company recorded a \$598,000 loss as "Change in fair value of derivatives and gain/(loss) on extinguishment of liabilities, net" in the Condensed Consolidated Statements of Operations to properly reflect the fair value of the embedded derivative of \$744,000 as of June 30, 2016.

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The derivative associated with the Series H Preferred Stock approximates management's estimate of the fair value of the embedded derivative liability at June 30, 2016 based on using a Monte Carlo simulation following a Geometric Brownian Motion with the following assumptions: annual volatility of 76%, present value discount rate of 12% and dividend yield of 0%.

Subsequent to June 30, 2016 the Company entered into an exchange agreement to cancel the Series H Preferred Stock, see Note 18 for further information.

### NOTE 14. STOCKHOLDERS' EQUITY

#### Common Stock

At June 30, 2016, the Company had 450,000,000 shares of common stock, \$0.0001 par value, authorized for issuance. Each share of common stock has the right to one vote. As of June 30, 2016, the Company had 28,010,028 shares of common stock outstanding. The Company has not declared or paid any dividends related to the common stock through June 30, 2016.

#### Preferred Stock

At June 30, 2016, the Company had 25,000,000 shares of preferred stock, \$0.0001 par value, authorized for issuance. Preferred stock may be issued in classes or series. Designations, powers, preferences, rights, qualifications, limitations and restrictions are determined by the Company's Board of Directors. 750,000 shares have been designated as Series A preferred stock, 2,000 shares have been designated for Series B-1 and B-2 preferred stock, 690 shares have been designated as Series C preferred stock, 3,000 shares have been designated as Series D preferred stock, 2,500 shares have been designated as Series D-1 preferred stock, 2,800 shares have been designated as Series E preferred stock, 7,000 shares have been designated as Series F preferred stock, 2,000 shares have been designated as Series G preferred stock, and 2,500 shares have been designated as Series H preferred stock. As of June 30, 2016, the Company had 212,390 shares of Series A preferred stock, 0 shares of Series B-1 and Series B-2 preferred stock, 0 shares of Series C preferred stock, 0 shares of Series D preferred stock, 0 shares of Series D-1 preferred stock, 737 shares of Series E preferred stock, 1,598 shares of Series F preferred stock, 2,000 shares of Series G preferred stock, and 625 shares of Series H preferred stock outstanding. The Company has no declared unpaid dividends related to the preferred stock as of June 30, 2016.

#### Series A Preferred Stock

In June 2013, the Company entered into a Securities Purchase Agreement with an investor to sell an aggregate of 750,000 shares of Series A Preferred Stock at a price of \$8.00 per share, resulting in gross proceeds of \$6,000,000. This purchase agreement included warrants to purchase up to 13,125 shares of common stock of the Company. The transfer of cash and securities took place incrementally, the first closing occurring on June 17, 2013 with the transfer of 125,000 shares of Series A Preferred Stock and a warrant to purchase 2,187 shares of common stock for \$1,000,000. The final closings took place in August 2013, with the transfer of 625,000 shares of Series A Preferred Stock and a warrant to purchase 10,938 shares of common stock for \$5,000,000.

Holders of Series A Preferred Stock are entitled to cumulative dividends at a rate of 8.0% per annum when and if declared by the Board of Directors in its sole discretion. The dividends may be paid in cash or in the form of common stock (valued at 10% below market price, but not to exceed the lowest closing price during the applicable measurement period), at the discretion of the Board of Directors. The dividend rate on the Series A Preferred Stock is indexed to the Company's stock price and subject to adjustment. In addition, the Series A Preferred Stock contains a make-whole provision whereby, conversion or redemption of the preferred stock within 4 years of issuance will

require dividends for the full four year period to be paid by the Company in cash or common stock (valued at 10% below market price, but not to exceed the lowest closing price during the applicable measurement period).

The Series A Preferred Stock may be converted into shares of common stock at the option of the Company if the closing price of the common stock exceeds \$232.00, as adjusted, for 20 consecutive trading days, or by the holder at any time. The Company has the right to redeem the Series A Preferred Stock at a price of \$8.00 per share, plus any accrued and unpaid dividends, plus the make-whole amount (if applicable). At June 30, 2016, the preferred shares were not eligible for conversion to common shares at the option of the Company. The holder of the preferred shares may convert to common shares at any time, at no cost, at a ratio of 1 preferred share into 1 common share (subject to standard ratable anti-dilution adjustments). Upon any conversion (whether at the option of the Company or the holder), the holder is entitled to receive any accrued but unpaid dividends and also any make-whole amount (if applicable). See Note 8. Make-Whole Dividend Liability.

During the six months ended June 30, 2016, the holder of the Series A Preferred Shares converted 0 preferred shares into 0 shares of common stock.

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Except as otherwise required by law (or with respect to approval of certain actions), the Series A Preferred Stock shall have no voting rights. Upon any liquidation, dissolution or winding up of the Company, after payment or provision for payment of debts and other liabilities of the Company, the holders of Series A Preferred Stock shall be entitled to receive, pari passu with any distribution to the holders of common stock of the Company, an amount equal to \$8.00 per share of Series A Preferred Stock plus any accrued and unpaid dividends.

Series D-1 Preferred Stock

On February 19, 2015, the Company entered into a securities purchase agreement to issue 2,500 shares of Series D-1 Preferred Stock to an investor in exchange for \$2,500,000. The proceeds were received on the closing date, February 25, 2015.

All amounts due under the Series D-1 Preferred Stock were convertible at any time, in whole or in part, at the option of the investor into shares of Common Stock at a fixed conversion price, which was subject to adjustment for stock splits, stock dividends, combinations or similar events. The Series D-1 Preferred Stock was convertible into shares of Common Stock at the initial price of \$46.20 per share.

The investor had the option to convert the Series D-1 Preferred Stock into shares of Common Stock at a "D-1 Alternate Conversion Price" equal to the lowest of (i) \$46.20 per share or (ii) 85% of the lowest VWAPs of the Common Stock on any trading day during the five consecutive trading day period, including the trading day immediately prior to the date of the applicable conversion date. During the quarter ended June 30, 2015, the investor exercised its option to convert 2,500 Preferred Shares, representing a value of \$2,500,000, at a D-1 Alternate Conversion Price resulting in the issuance of 115,292 Common Shares.

Holders of the Series D-1 Preferred Stock were entitled to receive dividends in the amount of 7% per annum, subject to increase to 15% per annum upon the occurrence and continuance of certain events of default. Dividends on the Series D-1 Preferred Stock were payable monthly in shares of Common Stock or cash, at the Company's option. During the quarter ended June 30, 2015, the Company paid dividends in the amount of \$6,944 on the Series D-1 Preferred Stock, resulting in the issuance of 195 shares of common stock.

The Company classified the Series D-1 Preferred Stock as a liability pursuant to ASC 480 on the closing date due to the structure of the financing agreement, whereby the Company had an unconditional obligation that the Company may settle by issuing a variable number of common shares with a monetary value that is fixed and known at inception. The Series D-1 Preferred Stock was fully converted into shares of common stock as of June 30, 2015.

Pursuant to a number of factors outlined in ASC Topic 815, Derivatives and Hedging, the conversion options in the Series D-1 Preferred Stock were deemed to include an embedded derivative that required bifurcation and separate accounting. As such, the Company ascertained the value of the conversion option as if separate from the convertible issuance and appropriately recorded that value as a derivative liability. At closing, a derivative liability and a corresponding debt discount in the amount of \$3.4 million were recorded. The debt discount of \$3.4 million was charged to interest expense. As of June 30, 2015, the value of the derivative liability associated with the Series D-1 Preferred Stock was \$0 as the Series D-1 Preferred Stock was fully converted as of June 30, 2015.

A net gain of \$2.7 million was recorded to "Change in fair value of derivatives and gain/(loss) on extinguishment of liabilities, net" in the Consolidated Statements of Operations for the quarter ended June 30, 2015 upon extinguishment of the D-1 Preferred Stock liability and the related embedded derivative.

The derivative associated with the Series D-1 Preferred Stock approximated management's estimate of the fair value of the embedded derivative liability at the closing date based on using a Monte Carlo simulation following a Geometric Brownian Motion with the following assumptions: annual volatility of 45%, present value discount rate of 12%, dividend yield of 0%, and a life of 0.2 years.

Series E Preferred Stock

Refer to Note 11 descriptions of Series E Preferred Stock.

Series F Preferred Stock

Refer to Note 12 descriptions of Series F Preferred Stock.

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## Series G Preferred Stock

Refer to Note 10 descriptions of Series G Preferred Stock.

## Series H Preferred Stock

Refer to Note 13 descriptions of Series H Preferred Stock.

## The Committed Equity Line

On November 10, 2015, the Company and the Private Investor entered into a committed equity line purchase agreement (the "CEL"). Under the terms and subject to the conditions of the CEL purchase agreement, at its option the Company has the right to sell to the Private Investor, and the Private Investor is obligated to purchase from the Company, up to \$32.2 million of the Company's common stock, subject to certain limitations, from time to time, over the 36-month period commencing on December 18, 2015, the date that the registration statement was declared effective by the SEC.

From time to time, the Company may direct the Private Investor, at its sole discretion and subject to certain conditions, to purchase an amount of shares of common stock up to the lesser of (i) \$1,000,000 or (ii) 300% of the average daily trading volume of the Company's common stock over the preceding ten trading day period. The per share purchase price for shares of common stock to be sold by the Company under the CEL purchase agreement shall be equal to 80% of the average of the two lowest VWAPs of the common stock for the ten consecutive trading day period prior to the purchase date. During the six months ended June 30, 2016, the Company directed the Private Investor to purchase \$1.06 million of common stock which resulted in the issuance of 525,454 shares of common stock. The remaining availability under the CEL as of June 30, 2016 was \$29,143,853.

The Company may not direct the Private Investor to purchase shares of common stock more frequently than once each ten business days. The Company's sales of shares of common stock to the Private Investor under the CEL purchase agreement are limited to no more than the number of shares that would result in the beneficial ownership by the Private Investor and its affiliates, at any single point in time, of more than 9.99% of the Company's then outstanding shares of common stock.

As consideration for entering into the CEL purchase agreement, the Company has issued to the Private Investor 132,000 shares of common stock (the "Commitment Shares"). The Commitment Shares were issued to the Private Investor in five increments which commenced upon the date that the registration statement was declared effective by the SEC.

## NOTE 15. EQUITY PLANS AND SHARE-BASED COMPENSATION

Share-Based Compensation: The Company measures share-based compensation cost at the grant date based on the fair value of the award and recognizes this cost as an expense over the grant recipients' requisite service periods for all awards made to employees, officers, directors and consultants.

The share-based compensation expense recognized in the Condensed Consolidated Statements of Operations was as follows:

	For the three months ended June 30,		For the six months ended June 30,	
	2016	2015	2016	2015
Share-based compensation cost included in:				
Research and development	\$ 79,595	\$ 52,896	\$ 125,284	\$ 154,205
Selling, general and administrative	260,547	143,463	432,696	303,295
Total share-based compensation cost	\$ 340,142	\$ 196,359	\$ 557,980	\$ 457,500

The following table presents share-based compensation expense by type:



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	For the three months ended June 30,		For the six months ended June 30,	
	2016	2015	2016	2015
Type of Award:				
Stock Options	\$ 141,574	\$ 121,497	\$ 236,958	\$ 286,997
Restricted Stock Units and Awards	198,568	74,862	321,022	170,503
Total share-based compensation cost	\$ 340,142	\$ 196,359	\$ 557,980	\$ 457,500

Stock Options: The Company recognized share-based compensation expense for stock options of \$237,000 to officers, directors and employees for the six months ended June 30, 2016 related to stock option awards ultimately expected to vest. The weighted average estimated fair value of employee stock options granted for the six months ended June 30, 2016 and 2015 was \$1.14 and \$14.60 per share, respectively. Fair value was calculated using the Black-Scholes Model with the following assumptions:

	For the six months ended June 30,	
	2016	2015
Expected volatility	115%	93%
Risk free interest rate	1%	2%
Expected dividends	—	—
Expected life (in years)	5.8	5.9

Expected volatility is based on the historical volatility of the Company's stock. The risk-free rate of return is based on the yield of U.S. Treasury bonds with a maturity equal to the expected term of the award. Historical data is used to estimate forfeitures within the Company's valuation model. The Company's expected life of stock option awards is derived from historical experience and represents the period of time that awards are expected to be outstanding.

As of June 30, 2016, total compensation cost related to non-vested stock options not yet recognized was \$293,000 which is expected to be recognized over a weighted average period of approximately 1.5 years. As of June 30, 2016, 79,823 shares were vested or expected to vest in the future at a weighted average exercise price of \$42.51. As of June 30, 2016, 165,076 shares remained available for future grants under the Option Plan.

Restricted Stock: In addition to the stock options discussed above, the Company recognized share-based compensation expense related to restricted stock grants of \$321,000 for the six months ended June 30, 2016. The weighted average estimated fair value of restricted stock grants for the six months ended June 30, 2016 and 2015 was \$1.97 and \$22.20 per share, respectively.

Total unrecognized share-based compensation expense from unvested restricted stock as of June 30, 2016 was \$274,000 which is expected to be recognized over a weighted average period of approximately 0.6 years. As of June 30, 2016, 193,458 shares were expected to vest in the future. As of June 30, 2016, 459,080 shares remained available for future grants under the Restricted Stock Plan.

**NOTE 16. RELATED PARTY TRANSACTIONS**

TFG Radiant owns approximately 1.0% of the Company's outstanding common stock as of June 30, 2016. In February 2012, the Company announced the appointment of Victor Lee as President and Chief Executive Officer. Mr. Lee had served on the Company's Board of Directors since November 2011 and is currently the managing director of Tertius Financial Group Pte Ltd, the joint venture partner with Radiant Group in TFG Radiant. In April 2012, the Company appointed the Chairman of TFG Radiant, Mr. Winston Xu (aka Xu Biao), as a member of its Board of Directors.



On April 6, 2015, the Company entered into a securities purchase agreement with TFG Radiant for a private placement of a total of 50,000 shares of the Company's common stock which resulted in gross proceeds of approximately \$1,000,000 to the Company. The transaction closed on April 17, 2015.

On June 10, 2015, the Company entered into a securities purchase agreement with TFG Radiant for a private placement of a total of 50,000 shares of the Company's common stock which resulted in gross proceeds of approximately \$1,000,000 to the Company. The transaction closed on July 10, 2015.

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NOTE 17. COMMITMENTS AND CONTINGENCIES

On October 21, 2011, the Company was notified that a complaint claiming \$3.0 million for an investment banking fee (the "Lawsuit") was filed by Jefferies & Company, Inc. ("Jefferies") against the Company in New York State Supreme Court in the County of New York. In December 2010, Ascent and Jefferies entered into an engagement agreement (the "Fee Agreement") pursuant to which Jefferies was hired to act as the Company's financial advisor in relation to certain potential transactions. In addition, Jefferies claimed an award for attorney's fees and prejudgment interest in the approximate amount of \$1.2 million.

On April 16, 2014, the parties settled the lawsuit where the Company agreed to pay Jefferies a total of \$2.0 million in equal installments over 40 months. The Company has paid \$300,000 during the six months ended June 30, 2016. The Company records a liability in its financial statements for costs related to claims, including settlements and judgments, where the Company has assessed that a loss is probable and an amount can be reasonably estimated. The Company accrued \$1.7 million, the net present value of the \$2.0 million settlement, as of December 31, 2013. As of June 30, 2016, \$50,000 was accrued for the long-term portion of this settlement and \$567,000 was recorded as Accrued litigation settlement, current portion, in the Condensed Consolidated Balance Sheets.

NOTE 18. SUBSEQUENT EVENTS

Offering of Senior Secured Convertible Notes

On July 13, 2016, the Company entered into a securities purchase agreement (the "Note SPA") with the Private Investor for the private placement of up to \$2,080,000 of the Company's 4% Original Issue Discount Senior Secured Convertible Promissory Notes (the "July 2016 Convertible Notes"). On July 13, 2016, the Company sold and issued \$364,000 principal amount of Notes to Investor in exchange for \$350,000 of gross proceeds. The Company will sell and issue the remaining \$1,716,000 principal amount of Notes to Investor in exchange for \$1,650,000 of gross proceeds in six additional weekly tranches scheduled to occur during July and August 2016.

Exchange of Outstanding Series H Preferred Stock

As described in Note 13, on June 9, 2016, the Company entered into a securities purchase agreement with the Private Investor for the sale of up to \$2.5 million of the Company's newly designated Series H 7% Convertible Preferred Stock. As of July 13, 2016, the Company has sold and issued 830 shares of Series H Preferred Stock to the Investor in exchange for \$830,000 of gross proceeds.

In connection with the offering of the July 2016 Convertible Notes, the Company and the Private Investor also entered into an Exchange Agreement dated July 13, 2016 (the "Exchange Agreement"). Under the terms of the Exchange Agreement, the outstanding shares of Series H Preferred Stock (approximately \$833,000 of capital and accrued dividends) have been cancelled. In exchange, the Company has issued to the Private Investor approximately \$866,000 of July 2016 Convertible Notes.

Accordingly, as of July 13, 2016, the Company has (i) an aggregate of \$1,230,000 principal amount of July 2016 Convertible Notes outstanding and (ii) no shares of Series H Preferred Stock which remain outstanding.

Terms of the Senior Secured Convertible Notes

Unless earlier converted or prepaid, all of the July 2016 Convertible Notes will mature July 13, 2017 (the "Maturity Date"). The July 2016 Convertible Notes bear interest at a rate of 10% per annum, subject to increase to 24% per annum upon the occurrence and continuance of an event of default. Principal on the July 2016 Convertible Notes is

payable on the Maturity Date. Interest on the Notes is payable quarterly. Principal and interest are payable in cash or, if specified equity conditions are met, shares of Common Stock.

The July 2016 Convertible Notes contain standard and customary events of default including but not limited to: (i) failure to make payments when due under the July 2016 Convertible Notes; and (ii) bankruptcy or insolvency of the Company. If there is an event of default, a holder of the July 2016 Convertible Notes may require the Company to immediately repay the July 2016 Convertible Notes in cash, at a price equal to 125% of the principal amount and accrued and unpaid interest.

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All principal and accrued interest on the July 2016 Convertible Notes are convertible at any time, in whole or in part, at the option of the Private Investor, into shares of Common Stock at a variable conversion price equal to the lowest of (i) \$0.045 (the “Fixed Conversion Price”), (ii) 70% of the lowest volume weighted average price (“VWAP”) of our Common Stock for the ten consecutive trading day period prior to the conversion date or (iii) 70% of the lowest closing bid price of our Common Stock for the ten consecutive trading day period prior to the conversion date. If certain defined triggering events occur, the conversion price would thereafter be reduced (and only reduced), to equal 60% of the lower of (i) the lowest closing bid price of the Common Stock for the thirty consecutive trading day period prior to the conversion date or (ii) the lowest VWAP of the Common Stock for the thirty consecutive trading day period prior to the conversion date. In addition, on the 90th day and also on the 180th day from the date of the Note SPA, the Private Investor may reset the Fixed Conversion Price to thereafter be equal to the VWAP of the Common Stock for such day or if such 90th or 180th day is not a trading day, then the VWAP for the immediately preceding trading day.

The July 2016 Convertible Notes will be secured by a security interest in substantially all of the Company’s assets. The subsidiaries of the Company have guaranteed the Company’s obligations under the July 2016 Convertible Notes.

In connection with the Note SPA, the Company entered into a related registration rights agreement (the “Note RRA”) agreeing to register the shares of Common Stock which may be issued upon conversion of the July 2016 Convertible Notes. The Note RRA requires the Company to file a resale registration statement with the Securities and Exchange Commission (the “SEC”) within 60 days of the date of the Note SPA, and to have such registration statement declared effective within 30 days after such filing.

Series I Convertible Preferred Stock Financing

On July 26, 2016, the Company entered into a securities purchase agreement with one accredited investor for the private placement of \$536,000 of the Company’s newly designated Series I Convertible Preferred Stock (“Series I Preferred Stock”). At closing, the Company issued a total of 536 shares of Series I Preferred Stock to the investor in exchange for the cancellation of an outstanding \$536,000 promissory note (including accrued interest) of the Company held by the investor.

The holder of the Series I Preferred Stock will be entitled to dividends in the amount of 10% per annum. Shares of the Series I Preferred Stock (including the amount of any accrued and unpaid dividends thereon) will be convertible at the option of the holder into common stock at a fixed conversion price of \$0.03 per share. One year after issuance, the Company is required to redeem for cash all or any portion of the outstanding shares of the Series I Preferred Stock at a price per share equal to \$1,000 plus any accrued but unpaid dividends thereon.

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Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion of our financial condition and results of operations should be read in conjunction with our unaudited financial statements and the notes to those financial statements appearing elsewhere in this Form 10-Q. This discussion and analysis contains statements of a forward-looking nature relating to future events or our future financial performance. As a result of many factors, our actual results may differ materially from those anticipated in these forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements.

Overview

We are a company formed to commercialize flexible photovoltaic modules using our proprietary technology. For the six months ended June 30, 2016, we generated \$966,000 of revenue. Our revenue from product sales was \$933,000 and our revenue from government research and development contracts was \$33,000.

Our proprietary manufacturing process deposits multiple layers of materials, including a thin film of highly efficient Copper-Indium-Gallium-diSelenide ("CIGS") semiconductor material on a flexible, lightweight, high tech plastic substrate using a roll-to-roll manufacturing process and then laser patterns the layers to create interconnected photovoltaic ("PV") cells, or PV modules, in a process known as monolithic integration. We believe that our technology and manufacturing process, which results in a lighter, flexible module package, provides us with unique market opportunities relative to both the crystalline silicon ("c-Si") based PV manufacturers that currently lead the PV market, as well as other thin film PV manufacturers that use substrate materials such as glass, stainless steel or other metals that can be heavier and more rigid than plastics.

We believe that the use of CIGS on a flexible, durable, lightweight, high tech plastic substrate will allow for unique and seamless integration of our PV modules into a variety of electronic products, building materials, defense, transportation and space applications, as well as other products and applications that may emerge. For markets that place a high premium on weight, such as consumer electronics, rooftop, defense, space, near space, and aeronautic markets, we believe our materials provide attractive increases in power-to-weight ratio, and we believe that our materials have higher power-to-area ratios and voltage-to-area ratios than competing flexible PV thin film technologies. We believe that our lightweight, flexible, and ultra-rugged technology is transformational in nature, and will provide us advantages in serving newly emerging specialty markets such as UAV's (unmanned aerial vehicles) as well as BAPV (building applied photovoltaic) and other applications where it is not possible to add solar panels to existing structures using traditional crystalline solar technology.

In 2012, we transitioned our business model adding a second business focused on developing PV integrated consumer electronics. In June of 2012, we launched our new line of consumer products under the EnerPlex™ brand, and introduced our first product, the Surfr™ battery and a solar case for the Apple® iPhone® 4/4S smart phone featuring our ultra-light CIGS thin film technology integrated directly into the case. The case incorporates our ultra-light and thin PV module into a sleek, protective iPhone 4/4S case, along with a thin, life extending, battery. The charger adds minimal weight and bulk to the iPhone, yet provides supplemental charging when needed.

In December 2012, we launched the EnerPlex Kickr™ and EnerPlex Jumpr™ product series. The Kickr IV is an extremely portable, compact and durable solar charging device, approximately seven inches by seven inches when folded, and weighs less than half a pound. The Kickr IV provides 6.5 watts of regulated power that can help charge phones, digital cameras, and other small USB enabled devices. The Kickr IV is ideal for outdoor activities such as camping, hiking and mountain climbing as well as daily city use. To complement the Kickr IV, we also released the Jumpr™ series of portable power banks. The Jumpr™ series provides a compact power storage solution for those who need to take the power of the sun with them on the go. Throughout 2014, EnerPlex released multiple additions to the Jumpr line of products: including the Jumpr Stack 3,6 & 9, innovative batteries equipped with tethered micro-USB and Apple

Lightning cables and revolutionary Stack & Charge design, enabling batteries to be charged simultaneously when they are placed on top of one another. Also released in 2014 was the Jumpr Slate series; products which push the boundaries of how thin batteries can be, the Jumpr Slate 10k, at less than 7mm thick was the thinnest lithium polymer battery available when it was released. The Jumpr Slate 5k and 5k Lightning each come with a tethered micro-USB and Lightning cable respectively; freeing consumers from worrying about toting extra cables with them while on the move.

At Outdoor Retailer 2014, EnerPlex debuted the Generatr Series, the Generatr 1200 and Generatr 100 are lithium-ion based large format batteries; lighter and smaller than competitors, the Generatr Series is targeted for consumers who require high-capacity, high-output batteries which remain ultra-portable when compared to the competition. Also debuted at Outdoor Retailer was the Commandr 20, a high output solar charger designed specifically to integrate with and charge the Generatr

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series, allowing consumers to stay out longer without needing to charge their Generatr batteries from a traditional power source.

In early January 2016, at the Consumer Electronics Show ("CES"), the Company debuted the Jumpr Fit line of high-performance portable batteries, included in this line were the Jumpr Fit iQ and FX, equipped with Qi compatible wireless charging and Qualcomm certified Quick Charge 2.0 capabilities respectively. Also debuted at CES was the Kickr Mini platform. Based on the previously announced MilPak military platform, the Kickr Mini integrates both power storage and generation into a single turnkey product.

Throughout 2013, we aggressively pursued new distribution channels for the EnerPlex™ brand; these activities have led to placement in a variety of high-traffic ecommerce venues such as [www.walmart.com](http://www.walmart.com), [www.brookstone.com](http://www.brookstone.com), [www.newegg.com](http://www.newegg.com) as well as many others including our own e-commerce platform at [www.goenerplex.com](http://www.goenerplex.com). The April 2013 placement of EnerPlex products at Fry's Electronics, a US West Coast consumer electronics retailer, represented our first domestic retail presence. EnerPlex products are carried in all of Fry's 34 stores across 9 states. In 2014 EnerPlex products launched in multiple online and brick-and-mortar partners; including BestBuy.com, 300 premium Verizon Wireless stores via partner The Cellular Connection (TCC) and 25 Micro Center stores across 16 states. In the third quarter of 2015, EnerPlex expanded its presence to 456 total TCC Verizon Wireless Premium retailers, adding 156 stores.

During the first quarter of 2015, we reached an agreement with EVINE Live, one of the premier home shopping networks with TV programming that reaches over 87 million US homes to begin selling EnerPlex products during their broadcasts. During the second quarter EnerPlex launched the Generatr S100 and select other products exclusively with EVINE, and in the third quarter the Generatr 1200 launched exclusively with EVINE for a limited period. During the second quarter of 2015, EnerPlex launched its products into two world recognized retailers; including over 100 The Sports Authority stores nationwide, in addition to launching in select Cabela's, "The World's Foremost Outfitter", stores and via Cabela's online catalog. Internationally, EnerPlex products became available in the United Kingdom via the brand's launch with 172 Maplin's stores throughout the country. During the fourth quarter of 2015, EnerPlex launched with GovX, the premier online shopping destination for Military, Law Enforcement and Government agencies.

In the first quarter of 2016, EnerPlex launched the new Emergency sales vertical, partnering with Emergency Preparedness eCommerce leader, Emergency Essentials.

We continue to design and manufacture PV integrated consumer electronics, as well as portable power applications for commercial and military users. Due to the durability enabled by the monolithic integration employed in our technology, the capability to customize modules into different form factors and the industry leading light weight and flexibility provided by our modules, we believe the potential applications for our products are numerous. During 2014, our partner in the United Kingdom, The Solar Cloth Company, won an award in the BIPV category for their use of Ascent Solar's modules in tensioned fabric applications; this application is an example of the high-volume opportunities which Ascent is positioned to take advantage of in the absence of other technologies which can match Ascent's industry leading durability and power-to-weight ratio. During the second quarter of 2015, Ascent Solar began the supply of solar panels for commercial production of the Silent Falcon Unmanned Aircraft. Building on the Company's experience in UAV's (unmanned aerial vehicles) the Company announced, in the third quarter of 2015, a partnership with Bye Aerospace to develop a solar powered aircraft for the improved investigation of Mars.

In early 2016, Ascent announced new breakthroughs in the Company's line of high-voltage solar products, designed specifically for high-altitude and space markets, building on the progress previously announced in Q4, 2015. Also during the first quarter of 2016, the Company announced the launch of select products on the GSA Advantage website; which allows Federal employees, including members of all branches of the US Military, to directly purchase Ascent and EnerPlex products including: the MilPak E, Commandr 20, Kickr 4 and WaveSol solar modules.

At the end of the first quarter of 2015, we announced that six EnerPlex products were awarded accolades as Red Dot Design Award winners, recognizing both the aesthetic as well as functional design of the Jumpr Quad, Jumpr Stack 3/6/9, the Generatr 100 and the Generatr 1200. During the third quarter of 2015, the Generatr 100 won a Best of Show Award at the CTIA Super Mobility show in Las Vegas. In 2015, Ascent Solar won its second R&D 100 Award. The 2015 award was given for the development of the MilPak platform, a military-grade solar power generation and storage unit. The MilPak platform is the only MIL-STD 810G tested, fully integrated power generation and storage solution available.

Commercialization and Manufacturing Strategy

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Our proprietary manufacturing process deposits multiple layers of materials, including a thin film of highly efficient Copper-Indium-Gallium-diSelenide (“CIGS”) semiconductor material, on a flexible lightweight plastic substrate using a roll-to-roll manufacturing process and then laser patterns the layers to create interconnected PV cells, or PV modules, in a process known as monolithic integration. Our monolithic integration techniques enable us to form complete PV modules with less or no costly back end assembly of intercell connections. Traditional PV manufacturers assemble PV modules by bonding or soldering discrete PV cells together. This manufacturing step typically increases manufacturing costs and at times proves detrimental to the overall yield and reliability of the finished product. By reducing or eliminating this added step using our proprietary monolithic integration techniques, we believe we can achieve cost savings in, and increase the reliability of, our PV modules. We believe our technology and manufacturing process, which results in a lighter, flexible module package, provides us with unique market opportunities relative to both the crystalline silicon (“c-Si”) based PV manufacturers that currently lead the PV market, as well as other thin-film PV manufacturers that use substrate materials such as glass, stainless steel or other metals that can be heavier and more rigid than plastics.

Currently, we are producing consumer oriented products focusing on charging devices powered by or enhanced by our solar modules. Products in these markets are priced based on the overall value proposition rather than a commodity-style price per watt basis. We continue to develop new consumer products and we have adjusted the utilization of our equipment to meet our near term forecast sales. We plan to continue the development of our current PV technology to increase module efficiency, improve our manufacturing tooling and process capabilities and reduce manufacturing costs. We also plan to continue to take advantage of research and development contracts to fund a portion of this development.

### Related Party Activity

In February 2012, we announced the appointment of Victor Lee as President and Chief Executive Officer. Mr. Lee had served on our Board of Directors since November 2011 and is currently the managing director of Tertius Financial Group Pte Ltd, the joint venture partner with Radiant Group, in TFG Radiant. In April 2012, we appointed the Chairman of TFG Radiant, Mr. Winston Xu (aka Xu Biao), as a member of our Board of Directors. TFG Radiant owns approximately 1.0% of our outstanding common stock as of June 30, 2016.

The addition of TFG Radiant as a major shareholder has significantly improved our capabilities on a number of fronts. TFG Radiant's domicile in China provides us access to high quality, low cost contract manufacturing in Asia through expansion of TFG Radiant's existing relationships, developed through many years of successful operation in China. Integrating these suppliers into our supply chain enables us to bring our products to market faster. TFG Radiant also provides a global product perspective that significantly improves the product design activities of our Thornton, Colorado designers as they collaborate with designers in Asia. We continue to integrate and improve the design-to-manufacture process where we manufacture modules in our US plant, ship them to Asia for completion into finished goods at low cost and then ship products to all markets we will serve.

On April 6, 2015, the Company entered into a securities purchase agreement with TFG Radiant for a private placement of a total of 50,000 shares of the Company's common stock which resulted in gross proceeds of approximately \$1,000,000 to the Company. The transaction closed on April 17, 2015.

On June 10, 2015, the Company entered into a securities purchase agreement with TFG Radiant for a private placement of a total of 50,000 shares of the Company's common stock which resulted in gross proceeds of approximately \$1,000,000 to the Company. The transaction closed on July 10, 2015.

### Significant Trends, Uncertainties and Challenges

We believe the significant trends, uncertainties and challenges that directly or indirectly affect our financial performance and results of operations include:

- our ability to generate customer acceptance of and demand for our products;
- successful ramping up of commercial production on the equipment installed;
- our products are successfully and timely certified for use in our target markets;
- successful operating of production tools to achieve the efficiencies, throughput and yield necessary to reach our cost targets;

the products we design are saleable at a price sufficient to generate profits;  
our strategic alliance with TFG Radiant results in the design, manufacture and sale of sufficient products to achieve profitability;

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our ability to raise sufficient capital to enable us to reach a level of sales sufficient to achieve profitability on terms favorable to us;

we are able to successfully design, manufacture, market, distribute and sell our newly introduced line of consumer oriented products;

effective management of the planned ramp up of our domestic and international operations;

our ability to successfully develop and maintain strategic relationships with key partners, including OEMs, system integrators, distributors, retailers and e-commerce companies, who deal directly with end users in our target markets;

our ability to maintain the listing of our common stock on the OTCQB Venture Market;

our ability to achieve projected operational performance and cost metrics;

our ability to enter into commercially viable licensing, joint venture, or other commercial arrangements; and

availability of raw materials.

### Critical Accounting Policies and Estimates

Critical accounting policies used in reporting our financial results are reviewed by management on a regular basis. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. Processes used to develop these estimates are evaluated on an ongoing basis. Estimates are based on historical experience and various other assumptions that are believed to be reasonable for making judgments about the carrying value of assets and liabilities. Actual results may differ as outcomes from assumptions may change.

Our significant accounting policies were described in Note 3 to our audited financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2015.

### Recent Accounting Pronouncements

See Note 3, “Summary of Significant Accounting Policies,” in the Notes to Condensed Consolidated Financial Statements.

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606). The update will establish a comprehensive revenue recognition standard for virtually all industries in GAAP. ASU 2014-09 will change the amount and timing of revenue and cost recognition, implementation, disclosures and documentation. In August 2015, the FASB issued ASU No. 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of Effective Date. The amendments in ASU 2015-14 defer the effective date of ASU 2014-09 for all entities by one year. ASU 2014-09 is now effective for the Company in fiscal year 2018. The Company is researching whether the adoption of ASU 2014-09 will have a material effect on the Company’s financial statements.

In August 2014, the FASB issued ASU No. 2014-15, Presentation of Financial Statements—Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern. ASU 2014-15 requires management to evaluate, in connection with preparing financial statements for each annual and interim reporting period, whether there are conditions or events, considered in the aggregate, that raise substantial doubt about an entity’s ability to continue as a going concern within one year after the date that the financial statements are issued and to provide certain disclosures if it concludes that substantial doubt exists. ASU 2014-15 is effective for all entities for the annual period ending after December 15, 2016, and for annual and interim periods thereafter, with early adoption permitted. We have not early adopted ASU 2014-15. The Company is researching whether the adoption of ASU 2014-15 will have a material effect on the Company’s financial statements.

In July 2015, the FASB issued ASU No. 2015-11, Inventory (Topic 330): Simplifying the Measurement of Inventory, which states that inventory should be measured at the lower of cost and net realizable value. Net realizable value is defined as estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. This ASU is effective within annual periods beginning on or after December 15, 2016, including interim periods within that reporting period. The Company is currently evaluating the impact, if any, that the adoption of this guidance will have on its financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). ASU 2016-02 requires lessees to recognize all leases, including operating leases, on the balance sheet as a lease asset or lease liability, unless the lease is a short-term lease.

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ASU 2016-02 also requires additional disclosures regarding leasing arrangements. ASU 2016-02 is effective for interim periods and fiscal years beginning after December 15, 2018, and early application is permitted. The Company is currently evaluating the impact, if any, that the adoption of this guidance will have on its consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, Improvements to Employee Share-Based Payment Accounting, which simplifies several aspects of the accounting for share-based payment transactions, including 1) accounting for income taxes, 2) classification of excess tax benefits in the statement of cash flows, 3) forfeitures, 4) minimum statutory tax withholding requirements, 5) cash flow classification of employee taxes withheld in the form of shares, 6) the practical expedient for estimating the expected term, and 7) intrinsic value. The guidance is effective for annual reporting periods beginning after December 15, 2016, and interim periods within those annual periods. The Company does not expect the implementation of ASU 2016-09 to have a material effect on its consolidated financial statements.

## Results of Operations

### Comparison of the Three Months Ended June 30, 2016 and 2015

**Revenues.** Our net revenues were \$255,000 for the three months ended June 30, 2016 compared to \$2,234,000 for the three months ended June 30, 2015, a decrease of \$1,979,000. Revenues for the three months ended June 30, 2016 include \$246,000 of product sales compared to \$2,143,000 for the three months ended June 30, 2015, a decrease of \$1,897,000. The decrease in product sales is largely the result of significantly decreased sales during the quarter to one of our large customers due to their existing stock of our products. Additionally during the second quarter, the Company entered into an amendment to our agreement with a different large customer. The terms of the amendment have delayed revenue recognition of our products sold to this large customer by ninety days. Revenues earned on our government research and development contracts decreased by \$82,000 during the three months ended June 30, 2016 to \$9,000.

**Cost of revenues.** Our Cost of revenues for the three months ended June 30, 2016 was \$1,273,000 compared to \$2,572,000 for the three months ended June 30, 2015, a decrease of \$1,299,000. The decrease is primarily attributed to a decrease in materials costs as a result of a decrease in units sold as compared to the second quarter in the prior year. Cost of revenues for the second quarter of 2016 is comprised of Materials and Freight of \$463,000, Direct Labor of \$100,000, and Overhead of \$710,000. Management believes our factory is currently significantly under-utilized, and a substantial increase in revenue would result in marginal increases to Direct Labor and Overhead. We are currently offering promotions and discounts in order to penetrate new markets. While these promotions and discounts have proved effective in building our brand and acquiring new customers, our gross margins have been negatively impacted.

**Research, development and manufacturing operations.** Research, development and manufacturing operations costs were \$1,785,000 for the three months ended June 30, 2016 compared to \$1,655,000 for the three months ended June 30, 2015, an increase of \$130,000. Research, development and manufacturing operations costs include costs incurred for product development, pre-production and production activities in our manufacturing facility. Research, development and manufacturing operations costs also include costs related to technology development and governmental contracts. The following factors contributed to the increase in research, development, and manufacturing operations expenses during the three months ended June 30, 2016:

1. Personnel related expenses increased \$180,000 as compared to the second quarter of 2015. The increase in personnel related costs was primarily due to an increase in wages paid to employees and stock compensation expense.
2. Consulting and Contract Services decreased by \$78,000 from the comparable quarter in the prior year. The decrease in expense as compared to the second quarter of 2015 was primarily attributed to the Company employing a lower

number of contractors during the quarter ended June 30, 2016.

Facility Related Expenses increased \$80,000 during the three months ended June 30, 2016. The increase is due to 3. slightly increased overhead allocations to the research and development department based on production results in the second quarter of 2016.

4. Materials and Equipment Related Expenses decreased \$36,000 from the comparable quarter in the prior year. The decrease in expense was a result of lower scrap expense and lower supplies expenses.
- Selling, general and administrative. Selling, general and administrative expenses were \$2,957,000 for the three months ended June 30, 2016 compared to \$3,523,000 for the three months ended June 30, 2015, a decrease of \$566,000. The following factors contributed to the decrease in selling, general, and administrative expenses during the three months ended June 30, 2016:

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1. Personnel related costs increased \$43,000 during the three months ended June 30, 2016 as compared to the three months ended June 30, 2015. The overall increase in personnel related costs was primarily due to an increase in wages paid to employees and stock compensation expense.

2. Marketing and related expenses decreased \$434,000 during the three months ended June 30, 2016 as compared to the three months ended June 30, 2015. The decrease in Marketing and related expenses is due to reduced marketing, advertising, and promotional activities through our customers during the second quarter of 2016 as compared to the second quarter of 2015.

3. Consulting and contract services decreased \$510,000 during the three months ended June 30, 2016 as compared to the three months ended June 30, 2015. The decrease was a result of decreased administrative/sales consulting expenses and contract labor during the quarter.

4. Legal expenses increased \$188,000 during the three months ended June 30, 2016 as compared to the three months ended June 30, 2015. The primary reason for the increase is due to legal expenses related to our patents as compared to the quarter ended June 30, 2015.

5. Public Company Costs decreased \$43,000 during the quarter ended June 30, 2016 as compared to the three months ended June 30, 2015. The decrease is primarily attributed to lower stock registration fees as compared to the comparable quarter in the prior year.

6. Bad Debt Expense increased \$163,000 during the three months ended June 30, 2016 as compared to the three months ended June 30, 2015. During the quarter the Company recorded additional reserves for customers whose accounts were greater than 120 days overdue.

Other Income / Expense, net. Other Income / Expense was a \$4,028,000 net expense for the three months ended June 30, 2016 compared to a \$4,411,000 net expense for the three months ended June 30, 2015, a decrease of \$383,000. The following factors contributed to the decrease in other income/(expense) during the three months ended June 30, 2016:

1. Interest Expense decreased \$3,852,000 as compared the second quarter of 2015. The decrease is primarily due to non-cash interest expense and amortization of debt discounts related to the Notes, Series D Preferred Stock and Series D-1 Preferred Stock. We did not incur substantial interest expense as a result of these instruments during the quarter ended June 30, 2016 because these instruments are no longer outstanding.

2. Change in fair value of derivatives and gain/(loss) on extinguishment of liabilities, net increased \$3,484,000 as compared to the second quarter of 2015. The increase in this non-cash expense is the result of changes in the fair value of our embedded derivative instruments during the quarters ended June 30, 2016 and June 30, 2015, and extinguishments of Series E Preferred Stock and Series F Preferred Stock.

Net Loss. Our Net Loss was \$11,168,000 for the three months ended June 30, 2016 compared to a Net Loss of \$11,338,000 for the three months ended June 30, 2015, a decrease of \$170,000.

The decrease in Net Loss for the three months ended June 30, 2016 can be summarized in variances in significant account activity as follows:

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	Decrease (increase) to Net Loss For the Three Months Ended June 30, 2016 Compared to the Three Months Ended June 30, 2015
Revenues	(1,979,000 )
Cost of Revenue	1,299,000
Research, development and manufacturing operations	
Materials and Equipment Related Expenses	36,000
Personnel Related Expenses	(180,000 )
Consulting and Contract Services	78,000
Facility Related Expenses	(80,000 )
Other Miscellaneous Costs	16,000
Selling, general and administrative expenses	
Personnel Related Expenses	(43,000 )
Marketing Related Expenses	434,000
Legal Expenses	(188,000 )
Public Company Costs	43,000
Bad Debt Expense	(163,000 )
Consulting and Contract Services	510,000
Other Miscellaneous Costs	(26,000 )
Depreciation and Amortization Expense	30,000
Other Income / (Expense)	
Interest Expense	3,852,000
Other Income/Expense	15,000
Non-Cash Change in Fair Value of Derivatives and Gain/Loss on Extinguishment of Liabilities, net	(3,484,000 )
Decrease to Net Loss	\$ 170,000

## Comparison of the Six Months Ended June 30, 2016 and 2015

Revenues. Our net revenues were \$966,000 for the six months ended June 30, 2016 compared to \$2,892,000 for the six months ended June 30, 2015, a decrease of \$1,926,000. Revenues for the six months ended June 30, 2016 include \$933,000 of product sales compared to \$2,676,000 for the six months ended June 30, 2015, a decrease of \$1,743,000. The decrease in product sales is largely the result of significantly decreased sales during the second quarter to one of our large customers due to their existing stock of our products. Additionally during the second quarter, the Company entered into an amendment to our agreement with a different large customer. The terms of the amendment have delayed revenue recognition of our products sold to this large customer by ninety days. Revenues earned on our government research and development contracts decreased by \$184,000 during the six months ended June 30, 2016 to \$33,000.

Cost of revenues. Our Cost of revenues for the six months ended June 30, 2016 was \$3,437,000 compared to \$4,154,000 for the six months ended June 30, 2015, a decrease of \$717,000. The decrease is primarily attributed to a decrease in materials costs as a result of a decrease in units sold as compared to the second quarter in the prior year. Cost of revenues for the six months ended June 30, 2016 is comprised of Materials and Freight of \$1,644,000, Direct Labor of \$279,000, and Overhead of \$1,514,000. Management believes our factory is currently significantly



under-utilized, and a substantial increase in revenue would result in marginal increases to Direct Labor and Overhead. We are currently offering promotions and discounts in order to penetrate new markets. While these promotions and discounts have proved effective in building our brand and acquiring new customers, our gross margins have been negatively impacted.

Research, development and manufacturing operations. Research, development and manufacturing operations costs were \$3,472,000 for the six months ended June 30, 2016 compared to \$3,371,000 for the six months ended June 30, 2015, an increase of \$101,000. Research, development and manufacturing operations costs include costs incurred for product development, pre-production and production activities in our manufacturing facility. Research, development and manufacturing operations costs

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also include costs related to technology development and governmental contracts. The following factors contributed to the increase in research, development, and manufacturing operations expenses during the six months ended June 30, 2016:

Personnel related expenses increased \$223,000 as compared to the six months ended June 30, 2015. The increase in 1. personnel related costs was primarily due to an increase in wages paid to employees and stock compensation expense.

Consulting and Contract Services decreased by \$183,000 from the comparable period in the prior year. The decrease 2. in expense as compared to the six months ended June 30, 2015 was primarily attributed to the Company employing a lower number of contractors during the quarter ended June 30, 2016 and reduced technical consulting expenses.

Facility Related Expenses increased \$101,000 during the six months ended June 30, 2016. The increase is due to 3. slightly increased overhead allocations to the research and development department based on production results during the six months ended June 30, 2016.

Selling, general and administrative. Selling, general and administrative expenses were \$5,944,000 for the six months ended June 30, 2016 compared to \$6,363,000 for the six months ended June 30, 2015, a decrease of \$419,000. The following factors contributed to the decrease in selling, general, and administrative expenses during the six months ended June 30, 2016:

Personnel related costs increased \$111,000 during the six months ended June 30, 2016 as compared to the six 1. months ended June 30, 2015. The overall increase in personnel related costs was primarily due to stock compensation expense.

Consulting and contract services decreased \$735,000 during the six months ended June 30, 2016 as compared to the 2. six months ended June 30, 2015. The decrease was a result of decreased administrative/sales consulting expenses and contractor expenses during the period.

Legal expenses increased \$234,000 during the six months ended June 30, 2016 as compared to the six months ended 3. June 30, 2015. The primary reason for the increase is due to legal expenses related to our patents and additional equity transactions as compared to the period ended June 30, 2015.

Public Company Costs decreased \$175,000 during the period ended June 30, 2016 as compared to the period ended 4. June 30, 2015. The decrease is primarily attributed to lower stock registration fees as compared to the comparable period in the prior year.

Bad Debt Expense increased \$100,000 during the six months ended June 30, 2016 as compared to the six months 5. ended June 30, 2015. During the six months ended June 30, 2016 the Company recorded additional reserves for customers whose accounts were greater than 120 days overdue.

Other Income / Expense, net. Other Income / Expense was a \$7,049,000 net expense for the six months ended June 30, 2016 compared to a \$15,277,000 net expense for the six months ended June 30, 2015, a decrease of \$8,228,000. The following factors contributed to the decrease in other income/(expense) during the six months ended June 30, 2016:

Interest Expense decreased \$11,555,000 as compared the comparable period in 2015. The decrease is primarily due 1. to non-cash interest expense and amortization of debt discounts related to the Notes, Series D Preferred Stock and Series D-1 Preferred Stock incurred in 2015. We did not incur substantial interest expense as a result of these instruments during the six months ended June 30, 2016 because these instruments are no longer outstanding.

2.

We incurred \$909,000 in non-cash interest expense during the six months ended June 30, 2015 as a result of the liability classified warrants associated with the Series D-1 Preferred Stock. This was a one-time non-recurring expense.

Change in fair value of derivatives and gain/(loss) on extinguishment of liabilities, net increased \$4,234,000 as compared to the first six months of 2015. The increase in this non-cash expense is the result of changes in the fair value of our embedded derivative instruments during the six months ended June 30, 2016 and June 30, 2015, and extinguishments of Series E Preferred Stock and Series F Preferred Stock.

Net Loss. Our Net Loss was \$21,693,000 for the six months ended June 30, 2016 compared to a Net Loss of \$29,125,000 for the six months ended June 30, 2015, a decrease of \$7,432,000.

The decrease in Net Loss for the six months ended June 30, 2016 can be summarized in variances in significant account activity as follows:

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	Decrease (increase) to Net Loss For the Six Months Ended June 30, 2016 Compared to the Six Months Ended June 30, 2015
Revenues	(1,926,000 )
Cost of Revenue	717,000
Research, development and manufacturing operations	
Materials and Equipment Related Expenses	16,000
Personnel Related Expenses	(223,000 )
Consulting and Contract Services	183,000
Facility Related Expenses	(101,000 )
Other Miscellaneous Costs	24,000
Selling, general and administrative expenses	
Personnel Related Expenses	(111,000 )
Marketing Related Expenses	25,000
Legal Expenses	(234,000 )
Public Company Costs	175,000
Bad Debt Expense	(100,000 )
Consulting and Contract Services	735,000
Other Miscellaneous Costs	(70,000 )
Depreciation and Amortization Expense	94,000
Other Income / (Expense)	
Interest Expense	11,555,000
Other Income/Expense	(2,000 )
Deemed (non-cash) Interest Expense on Warrant Liability	909,000
Non-Cash Change in Fair Value of Derivatives and Gain/Loss on Extinguishment of Liabilities, net	(4,234,000 )
Decrease to Net Loss	\$ 7,432,000

## Liquidity and Capital Resources

As of June 30, 2016, we had approximately \$0.1 million in cash and cash equivalents

On September 4, 2015, we entered into a note purchase agreement with two accredited investors (the “Accredited Investors”). Pursuant to the note purchase agreement, we issued to the Accredited Investors \$1.5 million original principal amount of secured subordinated convertible notes on September 4, 2015, and an additional \$0.5 million original principal amount of secured subordinated convertible notes on September 28, 2015. On April 29, 2016, we entered into Exchange Agreements (the “Exchange Agreements”), with the Accredited Investors to cancel the secured subordinated convertible notes. In exchange, we issued to the Accredited Investors rights to receive a fixed number of shares of our common stock in accordance with the terms of Rights to Receive Common Stock dated April 29, 2016. Additionally, on April 29, 2016, we entered into a securities purchase agreements with the Accredited Investors for the private placement of \$2.0 million of our newly designated Series G Convertible Preferred Stock (“Series G Preferred Stock”).

On November 4, 2015, we entered into a securities purchase agreement with a private investor (the "Private Investor") to issue 2,800 shares of Series E Preferred Stock in exchange for \$2.8 million.

On November 10, 2015, we entered into a committed equity line purchase agreement (the "CEL") with the Private Investor. Under the terms and subject to the conditions of the CEL purchase agreement, at our option we have the right to sell to the Private Investor, and the Private Investor is obligated to purchase from us, up to \$32.2 million of the our common stock, subject to certain limitations, from time to time, over the 36-month period commencing on December 18, 2015, the date that the registration statement was declared effective by the SEC. The remaining availability under the CEL as of June 30, 2016 is \$29.1 million.

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Actual sales of shares of common stock to the Private Investor under the CEL purchase agreement will depend on a variety of factors to be determined by us from time to time, including, among others, our ability to register shares of common stock with the SEC, market conditions, the trading price of the common stock and determinations by us as to the appropriate sources of funding for our operations.

As of January 27, 2016, we were not able to access the CEL because we do not have any registered shares available for use in connection with the CEL purchase agreement. We are in the process of registering an additional 2,400,000 shares for such purpose with the SEC. If such additional registration statement is declared effective by the SEC and such additional shares become available for use, our sales of shares pursuant to the CEL purchase agreement during 2016 would be limited to such 2,400,000 shares. Our use of the CEL in 2017 and beyond would require, among other things, us to file additional registration statements in the future that cover additional shares and have such registration statements declared effective. We would also need to maintain the effectiveness of such additional registration statements.

On January 19, 2016, we entered into a securities purchase agreement (the "Series F SPA") with the Private Investor for the sale of \$7 million of our newly designated Series F 7% Convertible Preferred Stock (the "Series F Preferred Stock").

On June 9, 2016, we entered into a securities purchase agreement (the "Series H SPA") with the Private Investor for the sale of up to \$2.5 million of the our newly designated Series H 7% Convertible Preferred Stock (the "Series H Preferred Stock"). However, subsequent to June 30, 2016, we entered into an exchange agreement to cancel the Series H Preferred Stock.

We have continued PV production at our manufacturing facility. We do not expect that sales revenue and cash flows will be sufficient to support operations and cash requirements until we have fully implemented our consumer products strategy. During the six months ended June 30, 2016, we used \$10.6 million in cash for operations. Our primary significant long term cash obligation consists of a note payable of \$5.6 million to a financial institution secured by a mortgage on our headquarters and manufacturing building in Thornton, Colorado. Total payments of \$0.4 million, including principal and interest, will come due in the remainder of 2016. We owe \$0.6 million as of June 30, 2016 related to a litigation settlement reached in April 2014, which is being paid in equal installments over 40 months, which began in April 2014.

Additional projected product revenues are not anticipated to result in a positive cash flow position for the year 2016 overall and as of June 30, 2016 we have negative working capital. As such, cash liquidity sufficient for the year ending December 31, 2016 will require additional financing. Subsequent to June 30, 2016, on July 13, 2016, we entered into a securities purchase agreement with the Private Investor for the private placement of up to \$2,080,000 of our 4% Original Issue Discount Senior Secured Convertible Promissory Notes.

We have continued to accelerate sales and marketing efforts related to our consumer products strategy through increased hiring and expansion of our sales channel. We have begun activities related to securing additional financing through strategic or financial investors, but there is no assurance we will be able to raise additional capital on acceptable terms or at all. If our revenues do not increase rapidly, and/or additional financing is not obtained, we will be required to significantly curtail operations to reduce costs and/or sell assets. Such actions would likely have an adverse impact on our future operations.

Statements of Cash Flows Comparison of the Six Months Ended June 30, 2016 and 2015

For the six months ended June 30, 2016, our cash used in operations was \$10.6 million compared to \$12.5 million for the six months ended June 30, 2015, a decrease of \$1.9 million. The decrease is primarily due to consistent inventory levels as of June 30, 2016 as compared to December 31, 2015. During the six months ended June 30, 2015, we increased inventory levels as compared to December 31, 2014 which significantly increased our cash used in

operations during the six months ended June 30, 2015. For the six months ended June 30, 2016, our cash used in investing activities was \$0.1 million as compared to \$0.2 million at June 30, 2015. During the six months ended June 30, 2016, negative operating cash flows of \$10.6 million were funded through \$9.6 million of funding received from issuances of preferred stock, \$1.1 million of funding received from the CEL and the use of cash and cash equivalents held at December 31, 2015.

#### Contractual Obligations

The following table presents our contractual obligations as of June 30, 2016. Our long-term debt obligation is related to our building loan reflecting both principal and interest. Our purchase obligations include orders for equipment, inventory and operating expenses.

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Contractual Obligations	Total	Payments Due by Year (in thousands)			
		Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
Long-term debt obligations	\$8,742	\$1,351	\$ 2,131	\$ 1,387	\$ 3,873
Operating lease obligations	26	26	—	—	—
Purchase obligations	1,637	1,637	—	—	—
Total	\$10,405	\$3,014	\$ 2,131	\$ 1,387	\$ 3,873

## Off Balance Sheet Transactions

As of June 30, 2016, we did not have any off balance sheet arrangements as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.

## Item 3. Quantitative and Qualitative Disclosures About Market Risk

## Foreign Currency Exchange Risk

Historically, we have purchased manufacturing equipment internationally, which exposes us to foreign currency risk. From time to time we enter into foreign currency fair value hedges utilizing forward contracts designed to match scheduled contractual payments to equipment suppliers. Our objective is to fix the dollar amount of our foreign currency denominated manufacturing equipment purchases at the time of order. Although our hedging activity is designed to fix the dollar amount to be expended, the asset purchased is recorded at the spot foreign currency rate in effect as of the date of the payment to the supplier. The difference between the spot rate and the forward rate has been reported as gain or loss on forward contract. We cannot accurately predict future exchange rates or the overall impact of future exchange rate fluctuations on our business, results of operations and financial condition. All forward contracts entered into by us have been settled on the contract settlement dates, the last of which was settled in December 2009.

Although our reporting currency is the U.S. Dollar, we may conduct business and incur costs in the local currencies of other countries in which we may operate, make sales and buy materials. As a result, we are subject to currency translation risk. Further, changes in exchange rates between foreign currencies and the U.S. Dollar could affect our future net sales and cost of sales and could result in exchange losses.

## Interest Rate Risk

Our exposure to market risks for changes in interest rates relates primarily to our cash equivalents. As of June 30, 2016, our cash equivalents consisted only of federally insured operating and savings accounts held with financial institutions. From time to time we hold money market funds, investments in U.S. government securities and high quality corporate securities. The primary objective of our investment activities is to preserve principal and provide liquidity on demand, while at the same time maximizing the income we receive from our investments without significantly increasing risk. The direct risk to us associated with fluctuating interest rates is limited to our investment portfolio and we do not believe that a change in interest rates will have a significant impact on our financial position, results of operations or cash flows.

## Credit Risk

From time to time we hold certain financial and derivative instruments that potentially subject us to credit risk. These consist primarily of cash, cash equivalents, restricted cash, investments and foreign currency option contracts. We are exposed to credit losses in the event of nonperformance by the counter parties to our financial and derivative instruments. We place cash, cash equivalents, investments and forward foreign currency option contracts with various high-quality financial institutions, and exposure is limited at any one institution. We continuously evaluate the credit standing of our counter party financial institutions.



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Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports filed or submitted under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission (SEC) rules and forms. Our management, including our Chief Executive Officer and interim Principal Financial Officer, conducted an evaluation required by Rules 13a-15 and 15d-15 under the Exchange Act of the effectiveness of our disclosure controls and procedures as defined in Rules 13a-15 and 15d-15 under the Exchange Act as of June 30, 2016. Based on this evaluation, our Chief Executive Officer and interim Principal Financial Officer concluded that as of June 30, 2016, our disclosure controls and procedures were effective.

Changes in Internal Control over Disclosure and Reporting

There was no change in our internal control over financial reporting that occurred during the quarterly period ended June 30, 2016 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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PART II. OTHER INFORMATION

Item 1. Legal Proceedings

On October 21, 2011, we were notified that a complaint (the “Lawsuit”) was filed by Jefferies & Company, Inc. (“Jefferies”) against us in state court located in the County and State of New York.

In December 2010, we and Jefferies entered into an engagement agreement (the “Fee Agreement”) pursuant to which Jefferies was hired to act as our financial advisor in relation to certain potential transactions. In the Lawsuit, Jefferies claims it is entitled to receive an investment banking fee of \$3.0 million (plus expense reimbursement of approximately \$49,000) under the Fee Agreement in connection with the August 2011 investment and strategic alliance transaction (the “Financing”) between us and TFG Radiant. In addition, should it prevail at trial, Jefferies would be able to claim an award for attorney's fees and prejudgment interest in the approximate amount of \$1.2 million. On April 16, 2014, the parties settled the lawsuit where the Company agreed to pay Jefferies a total of \$2.0 million in equal installments over 40 months. The Company has paid \$300,000 during the six months ended June 30, 2016. The Company records a liability in its financial statements for costs related to claims, including settlements and judgments, where the Company has assessed that a loss is probable and an amount can be reasonably estimated. The Company accrued \$1.7 million, the net present value of the \$2.0 million settlement, as of December 31, 2013. As of June 30, 2016, \$50,000 was accrued for the long-term portion of this settlement and \$567,000 was recorded as Accrued litigation settlement, current portion, in the Balance Sheets.

Item 1A. Risk Factors

In addition to the other information set forth in this report, you should carefully consider the factors discussed in the updated risk factors in our Annual Report on Form 10-K filed on March 11, 2016, which could materially affect our business, financial condition or future results. The risks described in our Annual Report on Form 10-K filed on March 11, 2016 are not the only risks facing our company. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition or future results.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds  
Not required.

Item 3. Defaults Upon Senior Securities  
Not applicable.

Item 4. Mine Safety Disclosures  
Not applicable.

Item 5. Other Information  
Not applicable.

Item 6. Exhibits  
A list of exhibits is found on page 35 of this report.



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ASCENT SOLAR TECHNOLOGIES, INC.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on the 15th day of August, 2016.

ASCENT SOLAR TECHNOLOGIES, INC.

By: /S/ VICTOR LEE

Lee Kong Hian (aka Victor Lee)

President and Chief Executive Officer

(Principal Executive Officer, acting Principal Financial Officer, and Authorized Signatory)

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ASCENT SOLAR TECHNOLOGIES, INC.  
EXHIBIT INDEX

- 3.1 Certificate of Designations of Preferences, Rights and Limitations of Series G 10% Preferred Stock (incorporated by reference to Exhibit 2 to Exhibits 10.5 and 10.6 to our Current Report on Form 8-K filed May 2, 2016).
- 3.2 Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Company, dated May 26, 2016 (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K filed June 2, 2016).
- 3.3 Certificate of Designations of Preferences, Rights and Limitations of Series H 7% Preferred Stock (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K filed June 9, 2016).
- 3.4 Certificate of Designations of Preferences, Rights and Limitations of Series I Preferred Stock (incorporated by reference to Exhibit 2 to Exhibit 10.1 to our Current Report on Form 8-K filed July 28, 2016).
- 10.1 Exchange Agreement dated April 29, 2016 (incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K filed May 2, 2016).
- 10.2 Exchange Agreement dated April 29, 2016 (incorporated by reference to Exhibit 10.2 to our Current Report on Form 8-K filed May 2, 2016).
- 10.3 Right to Receive Common Stock dated April 29, 2016 (incorporated by reference to Exhibit 10.3 to our Current Report on Form 8-K filed May 2, 2016).
- 10.4 Right to Receive Common Stock dated April 29, 2016 (incorporated by reference to Exhibit 10.4 to our Current Report on Form 8-K filed May 2, 2016).
- 10.5 Series G Securities Purchase Agreement dated April 29, 2016 (incorporated by reference to Exhibit 10.5 to our Current Report on Form 8-K filed May 2, 2016).
- 10.6 Series G Securities Purchase Agreement dated April 29, 2016 (incorporated by reference to Exhibit 10.6 to our Current Report on Form 8-K filed May 2, 2016).
- 10.7 Series H Securities Purchase Agreement dated June 9, 2016 (incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K filed June 9, 2016).
- 10.8 Series H Registration Rights Agreement dated June 9, 2016 (incorporated by reference to Exhibit 10.2 to our Current Report on Form 8-K filed June 9, 2016).
- 10.9\* Secured Note Securities Purchase Agreement dated July 13, 2016.
- 10.10\* Form of Secured Note dated July 13, 2016.
- 10.11\* Security Agreement dated July 13, 2016.
- 10.12\* Exchange Agreement dated July 13, 2016.
- 10.13\* Registration Rights Agreement dated July 13, 2016.
- 10.14 Series I Securities Purchase Agreement dated July 26, 2016 (incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K filed July 28, 2016).
- 31.1\* Chief Executive Officer Certification pursuant to section 302 of the Sarbanes-Oxley Act of 2002
- 31.2\* Chief Financial Officer Certification pursuant to section 302 of the Sarbanes-Oxley Act of 2002
- 32.1\* Chief Executive Officer Certification pursuant to section 906 of the Sarbanes-Oxley Act of 2002
- 32.2\* Chief Financial Officer Certification pursuant to section 906 of the Sarbanes-Oxley Act of 2002

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Exhibit No. Description

101.INS XBRL Instance Document

101.SCH XBRL Taxonomy Extension Schema Document

101.CAL XBRL Taxonomy Extension Calculation Linkbase Document

101.DEF XBRL Taxonomy Extension Definition Linkbase Document

101.LAB XBRL Taxonomy Extension Label Linkbase Document

101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

\*Filed herewith.