

**PHOTON CONTROL INC.**

**MANAGEMENT'S DISCUSSION AND ANALYSIS**

For the year ended December 31, 2009

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This Management's Discussion and Analysis ("MD&A") of Photon Control Inc. (the "Company" or "Photon") is dated April 22, 2010. MD&A should be read in conjunction with the Audited Consolidated Financial Statements and accompanying notes as at and for the years ended December 31, 2009 and 2008.

### **Forward-Looking Statements**

This MD&A contains forward looking statements, including statements regarding the business and anticipated financial performance of the Company, which involve risks and uncertainties. These risks and uncertainties may cause the Company's actual results to differ materially from those contemplated by the forward-looking statements. Factors that might cause or contribute to such differences include, among others, uncertainty as to the Company's ability to successfully complete new purchase orders along the timelines expected; the Company's need for funds to achieve its goals and uncertainties as to the availability and cost of financing the Company; uncertainty as to the continued and future demand for the Company's products; the Company's present reliance on four major customers for the majority of its sales; the Company's reliance on the financial health of the semiconductor industry, a vital part of its sales; the Company's ability to continue and further enhance revenue diversification and open new market opportunities; the development of competing technologies and the possibility of increased competition; the effect of slow growth in the Canadian, United States and international economies generally and other economic trends and conditions in the markets that the Company and its customers serve; the effect of the risks associated with technical difficulties or delays in product introductions, improvements, implementation, product pricing or other initiatives of the Company and its competitors; factors that may result in a reduction in capital expenditures and/or delayed buying decisions affecting demand for the Company's products; currency fluctuations; and the possibility that the Company will pursue additional development projects in order to support existing customers or pursue other business opportunities.

Forward-looking statements are based on the beliefs, opinions and expectations of the Company's management at the time they are made, and the Company may but does not assume any obligation to update its forward-looking statements if those beliefs, opinions or expectations, or other circumstances, should change except as may be required by applicable securities laws. Readers should not place undue reliance on forward-looking statements.

### **BUSINESS OVERVIEW**

Photon Control Inc. is a British Columbia company listed on the TSX Venture Exchange (TSX-V) under the symbol PHO. Photon commercializes innovative optical sensor systems capable of use by customers in a variety of sectors. Photon's approach to creating shareholder value has been to pursue Original Equipment Manufacturer (OEM) sales whether directly or through a distributor and to investigate the market potential of products by working directly with customers in select industries to foresee their sectors' requirements. These collaborations often include commitments to conduct trials of the new products on industrial sites.

Photon's measurement and control instruments are intended for applications with high demands for precision, repeatable performance and quality assurance. The semiconductor manufacturers that are Photon customers set very high standards of supply chain management and Photon has satisfied these requirements.

Currently Photon supplies products to its 'Fortune 500' customer base through integrator contractors located in the USA, Europe, and Asia and directly supplies products to a second major capital equipment manufacturer located in Silicon Valley.

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While focusing on manufacturing and distribution of high-quality products, Photon has established a strong business relationship with Photon Control R&D Ltd. ("Photon R&D", an engineering and R&D company to which the Company had transferred its research and development division assets as of October 2008) for the purpose of converting the Company's intellectual property (consisting of 9 issued and 16 pending patents) into commercial products.

Photon has a strong and highly skilled employee base and has successfully managed to recruit and retain qualified personnel through competitive employment terms relative to the local labour market. As at December 31, 2009, Photon staff included 28 full-time personnel, representing an increase of 40% compared to 20 full-time personnel at the end of 2008.

### **COMMERCIALIZED PRODUCTS AND BUSINESS TRENDS**

The Company is supplying or starting to provide commercial products to the following market verticals through direct sales and in some cases through distributors for particular territories.

Manufacturing -  
Semiconductor Capital  
Equipment:

- OEM sensing solutions (sensors for positioning, spacing, detection, and related controls, robot alignment and positioning jigs, analytical tools for inspection of silicon wafers) or Silicone Wafer Sensing
- Spectrometers
- Fiber optic temperature sensors

Oil, Gas & Petrochemical:

- Optical flow meters for measurement of stack emissions (greenhouse gases, flares), fuel gas, associated gas, coal bed methane, biogas
- Total sulphur analyser for measurement of total sulphur content in diesel, gasoline, kerosene, jet fuel and other processed hydrocarbons
- Fiber optic temperature and pressure sensors for down-hole monitoring

Power & Energy:

- Temperature Sensor Systems

Life Sciences:

- Spectrometers
- Fiber Optic Temperature Sensors

Institutional:

- Spectrometers
- Fiber Optic Temperature Sensors
- fMRI Response (LUMItouch<sup>®</sup>)

Food and Drug:

- Spectrometers

### **MARKETING**

Photon has broad geographic representation with dedicated distributors in North America, Europe and Asia. In Q4 2009, Photon continued to evaluate new opportunities by focusing on marketing and business development and addressing both the current and future demands of its market. In line with this objective, Photon continued to strengthen its existing relationships and is actively seeking new distributors for its temperature sensor, spectrometer and flare meter product lines in key International markets.

In 2009, Photon signed 3 additional distributorship agreements for temperature sensors, spectrometers, flow meters, and downhole temperature and pressure systems which validates the Company's expanded sales and marketing efforts and resulted in the successful securing of orders from new customers as well as follow-on orders from existing customers. Also, Photon continued to penetrate the Asian market with its low-cost fiber optic temperature sensor product by developing a marketing alliance with a key distributor across this territory.

During 2009, Photon participated in the Photonics West 2009 show in San Jose, the Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy (Pittcon), and the Electronica & Productronica China (EP China) which are tradeshow for temperature sensors and spectrometers. Photon also attended the MD&M (Medical Design & Manufacturing) West 2009 Anaheim conference to explore new manufacturing opportunities.

### **CORPORATE VISION AND STRATEGY**

Although economic and market uncertainties and order volatility required Photon and its customers to reposition its business plans over 2009 and the Company continues to be challenged by the timing of its major accounts orders, Photon remains focused and fully committed to its core values and long-term growth strategy.

Some of Photon's key operational objectives are:

- To enhance its sales opportunities on a global scale;
- Steadily expand manufacturing efficiency, capacity and recruitment in order to meet increased customer demands;
- Implement operating cost structures that align with revenue growth;
- Create efficient financial planning and maintain strong budget controls in order to quickly adapt to new and changing market conditions;
- Renegotiate contracts with vendors and suppliers to obtain more favourable terms; and
- Adhere to strict inventory control procedures.

These activities were underway during 2009 and are part of the continuing liquidity management and organizational efficiency development in 2010.

**SELECTED ANNUAL INFORMATION**

Certain of the comparative figures in the following table have been reclassified to conform with the presentation adopted for 2010.

|   | Year ended December 31 |             |             |
|---|------------------------|-------------|-------------|
|   | 2009                   | 2008        | 2007        |
| Total Revenues  | 5,387,710              | 5,350,378   | 6,065,851   |
| Income (loss) before discontinued operations and extraordinary items                              | 184,726                | (1,123,404) | (2,410,949) |
| Income (loss) per share before discontinued operations and extraordinary items, Basic and diluted | 0.00                   | (0.01)      | (0.03)      |
| Net income (loss)   | 184,726                | (1,123,404) | (2,410,949) |
| Net income (loss) per share, Basic and diluted  | 0.00                   | (0.01)      | (0.03)      |
| Total assets  | 4,510,690              | 3,716,495   | 3,729,914   |
| Total long-term financial liabilities   | 441,864                | 516,966     | 522,759     |
| Cash dividends declared per Common Share  | —                      | —           | —           |

**FOURTH QUARTER 2009**

**Highlights**

- Q4 2009 Sales of \$2.6 million compared to Q4 2008 Sales of \$1.4 million
- Q4 2009 Operating Expenses of \$0.5 million equal to Q4 2008
- Q4 2009 Profit of \$193,046 compared to Q4 2008 Profit of 37,332
- Q4 2009 Gross Margin of 29% compared to 34% for Q4 2008
- Q4 2009 Order Backlog of \$3.5 million compared to \$0.4 million for Q4 2008

**Sales**

During Q4 2009, Photon achieved a new sales and profit record for the quarter. Q4 2009 sales were \$2.6 million compared to \$1.4 million in Q4 2008, an increase of \$1.2 million or 86%. Sales revenue from Q4 2009 represented 48% of the total year's revenue compared to 26% from Q4 2008 sales revenue for 2008.

**Expenses**

General and administrative expenses totalled \$238,696 in Q4 2009 compared to \$150,575 in Q4 2008. This reflects the increase in financial department services and office costs due to the increase of business during the second half of the year; however, 2009 general and administrative expenses decreased 20% compared to 2008.

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Research and development expenses totalled \$271,230 in Q4 2009 compared to \$333,612 in Q4 2008. This reflects a reduction in salaries, materials and premises expenses due to the separation of research and development services from Photon.

Business development and marketing expenses totalled \$25,440 for Q4 2009. This increase of \$38,168 when compared to Q4 2008 of \$(12,728), which is a reversal of payroll entries in 2008 related to Mr. Robert Blair, former President's salary, reflects the cost of trade shows participation and costs associated with establishing a new distributor for 2009.

### **Profit for the Period**

The profit for Q4 2009 of \$193,046 represented a 417% increase over Q4 2008 and reflected the increased sales through this period (\$2,577,936 for Q4 2009, \$1,420,234 for Q4 2008) with a larger gross profit of \$268,553.

### **RESULTS OF OPERATIONS**

In 2007 and 2008, Photon's product sales were at the lower volumes than expected primarily due to the deepening slowdown of the worldwide semiconductor industry, reduction in sales to one of the Company's major accounts and the global economic conditions. During 2007, this was partially offset by Photon's initiatives to reduce its operating expenses through selective reduction of personnel and R&D expenditures. In 2008, Photon continued to align its spending levels to the Company's revenue outlook through a number of permanent and temporary actions ranging from lean manufacturing, stricter capital allocation and diversification of its product range. Additional cost savings in 2008 derived from the reduction of Photon's in house research and development department. As a result of Photon's efforts to improve on its performance and growth potential, the Company achieved break-even financial results through the second half of 2008.

#### **2009 Overview**

In 2009, Photon's focus on prudent operational structure, diversification, and quality of customer relationships was intended to secure consistent delivery of high quality and value-added services to its customers, to enhance revenue diversification and open new market opportunities, and to develop a business and marketing alliance with new partners and distributors. In addition, Photon took decisive actions to achieve lean manufacturing, enhanced operational efficiency and effective cost-saving solutions, which resulted in improved operating results in each of its business segments during 2009. Additional cost savings were derived from the reduction of salary expenses by approximately 20% through participation in the work-sharing program which is part of the employment insurance program under Human Resources and Skills Development Canada.

Despite a slow start to the year and general slowdown in the economy during 2009, Photon achieved strong sales and profit growth during the third quarter and especially during the fourth quarter, making 2009 the first profitable year in Photon's history. Photon's product sales rose substantially in Q4 2009 achieving a new sales and profit record for the quarter. In order to fulfil the significant increase in orders and order backlog during the second half of the year, Photon returned to a five-day work week in September, 2009.

In 2009, Photon's sales to the semiconductor sector doubled quarter-over-quarter and contributed significantly to the annual and Q4 2009 financial results, reflecting the improved conditions in this market. Also, during 2009, Photon continued to grow revenues in other sectors which included primarily the sale of analytical products for the semiconductor and non-semiconductor industries as well as increased sales of fibre optic temperature sensors and flare gas meters.

For the year 2009, the gross margin was 38%, compared to 36% in 2008. The improvements in gross margin during 2009 were primarily due to an increase in sales of more favourable margin products and the strategic purchase of components and material.

As at December 31, 2009 the Company's \$500,000 bank line of credit was fully utilized. Although there can be no assurances, Photon believes that cash generated from operations, committed purchase orders, and the availability of the Company's line of credit will give Photon financial resources necessary to operate in the current year and the foreseeable future.

In October 2009, Photon promoted Christopher Weston to President of the Company. Mr. Weston has assumed a principal leadership role for the execution of Photon's overall business with which he was familiar as Marketing Director previously. Mr. Weston, together with Helena Rebec (the Company's Assistant Corporate Secretary and Acting Manager of Investor Relations and Human Resources), were also appointed to the Board of Directors of the Company in 2009.

As part of the direct supplier qualification by our 'Fortune 500' customer, Photon successfully completed the physical audit of our Quality Management System in Q3 2009.

### **Product Sales and Operational Update**

Product sales in fiscal 2009 were \$5.4 million, equal to the \$5.4 million in 2008, primarily due to the global economic conditions and significant demand volatility across the semiconductor sector. During the first half of the year, Photon experienced projects being deferred and a reduction in sales to one of the Company's major accounts. However, following the improved business conditions in the second half of 2009, Photon was able to achieve its first ever profitable year in 2009 with \$0.2 million profit, compared to a loss of \$1.1 million for 2008.

In 2009, Photon continued initiatives to diversify its product range and to develop relationships with new distributors for its products for the oil and gas industry (e.g. low cost fibre optic temperature sensors and spectrometers). In line with these objectives, Photon continued to make significant progress in market diversification in 2009 which was reflected in sales to non-semiconductor customers of \$1.5 million, accounting for 28% of total sales in 2009 and an increase of 15% over 2008 non-semiconductor sales of \$1.3 million. The second half of 2009 saw the improved business environment for the semiconductor industry which resulted in Photon's sales to this market doubling from quarter to quarter.

Following the completion of a low cost fibre optic temperature sensor for the electrical power distribution industry in 2008 and initial sales being established in Europe and Asia in Q1 2009, Photon experienced steady growth in this sector throughout 2009, which accounted for 2.3% of total sales.

Further to receiving its first volume purchase order for optical gas flow meters from Russia in September 2009, Photon's sales for this product segment nearly tripled in Q4 2009 when compared with the previous quarter. In Q4 2009, following the growing customer interest on environmental monitoring, Photon commenced testing of its optical gas flow meters for expanded sizes of pipes from 8" to 30" to cover a majority of applications for flare gas measurement. In January 2010, Photon successfully completed testing and calibration of its Focus Probe flow meters, which was essential for the Company's long-term objective to expand its presence in the gas flow metering market and to enhance its diversification program and sustainability.

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In response to increased interest in its Downhole Pressure and Temperature Sensors (DPTS), which are used in oil-sand SAGD (Steam-Assisted Gravity Drainage) applications, Photon signed its first distributorship agreement for selling DPTS in the Russian Federation and in CIS (Community of Independent States) in Q3 2009. After the successful commissioning of the first commercial DPTS in Q4 2008, and the subsequent repeat order from a major oil and gas company for one additional system in Q3 2009, Photon completed the installation of its DPTS system in Alberta in Q1 2010.

### **Gross Margin**

The gross margin percentage for 2009 of 38% increased slightly from the 2008 gross margin percentage of 36%. The improvements in gross margin during 2009 were primarily due to an increase in sales of more favourable margin products and the strategic purchase of components and material.

### **Operating Expenses**

General and administrative expenses totalled \$882,245 in 2009 compared to \$1,106,443 in 2008. General and administrative expenses decreased through:

- salaries of \$454,391
- insurance expenses of \$36,115

and offset by increases in:

- office expenses of \$76,854 (\$190,919 decreased by rent recovery of \$114,065)
- legal and accounting fees of \$53,801
- Allowance for doubtful accounts of \$100,000
- other general and administrative expenses of \$35,653

The salary decrease in 2009 relates to the departure of two senior executives in 2008 which materialized savings in 2009 and reduced employment hours from the implementation of production work share with a 4-day work week for part of the year (a 5-day work week resumed in September 2009).

Research and development expenses totalled \$613,450 in 2009 compared to \$1,701,658 in 2008 primarily due to separation of the R&D business which started in Q4 2008.

Business development and marketing expenses totalled \$130,690 in 2009 compared to \$191,213 in 2008 due primarily to decreases in:

- travel expenses of \$24,258
- promotional expenses of \$23,218
- consulting fees of \$16,679

and offset by an increase in:

- other expenses of \$20,074

### **Other Expenses**

Photon's products are priced in U.S. dollars. A foreign exchange loss of \$70,702 was recorded in 2009 compared to a foreign exchange gain of \$119,163 in 2008 due to a substantial weakening of the Canadian dollar against the U.S. dollar in Q2 2009 and its subsequent weakening in 2009, versus a strengthening of the Canadian dollar in Q4 2008 which resulted in the 2008 gain.

### **Net Earnings**

The net earnings for 2009 were \$184,726 compared to a loss of \$1,123,404 in 2008 resulting in the Company's first profitable year ever. This improvement in operating results was attributable to a decrease in operating expenses of \$1,381,325 and an increase in gross margin of \$128,058 from sales.

**ORDER BACKLOG**

The fourth quarter of 2009 continued to be influenced by the significant increase in Photon's order backlog, which reached a new record level of \$3.5 million. This represents the value of sales orders already fulfilled in Q1 2010 and/or waiting to be fulfilled in 2010. As at the date of this report, Photon's order backlog stood at \$3.3 million.

**SUMMARY OF QUARTERLY RESULTS**

The following table is a summary of our financial results for the past eight quarters. Certain of the comparative figures in the following table have been reclassified to conform with the presentation adopted for 2009.

|                             | December<br>31, 2009 | September<br>30, 2009 | June<br>30, 2009 | March<br>31, 2009 | December<br>31, 2008 | September<br>30, 2008 | June<br>30, 2008 | March<br>31, 2008 |
|-----------------------------|----------------------|-----------------------|------------------|-------------------|----------------------|-----------------------|------------------|-------------------|
| Revenue                     | \$ 2,577,936         | \$ 1,489,914          | \$ 683,971       | \$ 635,889        | \$ 1,420,232         | \$ 1,058,453          | \$ 1,519,366     | 1,352,327         |
| Net income / loss           | \$ 193,042 (1)       | \$ 343,340            | \$ (191,064)     | \$ (160,592)      | \$ 37,332            | \$ 37,793             | \$ (520,553)     | \$ (677,976)      |
| Net income / loss per share | \$ 0.00              | \$ 0.00               | \$ (0.00)        | \$ (0.00)         | \$ 0.00              | \$ 0.00               | \$ (0.01)        | \$ (0.01)         |

(1) Includes an allowance for bad debts set up in 2009 of \$100,000

**LIQUIDITY AND CAPITAL RESOURCES**

Cash and cash equivalents at December 31, 2009 had a balance of \$12, 955 compared to \$108,582 as at December 31, 2008. The Company had working capital of \$812,039 as at December 31, 2009 compared to working capital of \$665,131 as at December 31, 2008. This decrease in cash and increase in working capital has resulted from the continued use of cash for operations as detailed below.

Cash used in operations totalled \$246,093 in 2009 compared to \$711,574 in 2008. Investing activities used cash of \$61,995 in 2009 compared to \$470,916 in 2008. Cash provided in financing activities were \$212,461 in 2009 relating to the Company's credit facility. This compares to cash provided by financing in 2008 of \$286,625 relating to this credit facility.

As at December 31, 2009, the Company's accounts payable and accrued liabilities was \$1,626,085 which fall due for payment within twelve months of the balance sheet date. As at December 31, 2009, the Company was utilizing all of its \$500,000 credit facility.

**Nature of and Continuing Operations**

The Company's financial statements for the year ended December 31, 2009 have been prepared by management on a going-concern basis, which assumes the Company will continue in operation for the foreseeable future and will be able to realize its assets and settle its liabilities and commitments in the normal course of business. These financial statements do not reflect the adjustments to the carrying values of assets and liabilities and the reported expenses and balance sheet classifications that would be necessary should the going concern assumption become inappropriate.

The Company's ability to continue as a going concern is dependant upon its ability to fund working capital and its ability to generate positive cash flows from operations.

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The Company has made efforts to diversify the industries that it serves in an attempt to reduce the impact of a downturn on any one segment. The continued manufacturing and distribution of existing products and the commercialization of new products in 2010 form the basis of management's opinion that the Company will meet its liabilities and commitments as they become due. The Company is currently monitoring all expenditures and implementing cash management strategies to ensure that it has adequate cash reserves to fund identified expenditure requirements.

The Company is working with its bank to secure financing over and above the \$500,000 line of credit it currently has. To this end, the Company has insured its receivables in order to receive additional asset-based financing.

### **Contractual Obligations**

Leases:

The Company has entered into premises leases requiring the following minimum lease payments as follows:

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|      |              |
|------|--------------|
| 2010 | 849,314      |
| 2011 | 667,132      |
| 2012 | 216,443      |
|      | <hr/>        |
|      | \$ 1,732,889 |

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The above lease commitment amounts are prior to rental expense recoveries of \$213,657 per annum for 2010 plus \$17,805 in 2011 in relation to sub-lease agreements executed in 2006 and 2007.

The Company entered into a lease agreement in June 2006 and in 2009 has recorded \$119,808 (2008 – 194,910) in deferred rent to account for reduced rent benefits received.

Litigation:

In October 2001, a former member of management and director of the Company (the "Claimant") initiated arbitration proceeding asserting that certain amounts were owing to him by the Company. The Company denies that it owes these amounts.

In addition, the Claimant has filed a claim against the Company seeking unspecified damages for wrongful dismissal. The Company considers the allegations in the lawsuit to be without merit and intends to defend the action. The Company has also filed a counterclaim.

The Company's application to dismiss the claim was denied in September 2009 and trial of claims and cross-claims is scheduled to commence in September 2010.

It is not possible to determine the likely outcome of these litigation matters, nor is it possible to determine the nature and amount of consideration, if any, which the Company may have to pay or which it may collect as a result of these proceedings. Provision has been made in the accounts of the Company for these actions.

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## **RELATED PARTY TRANSACTIONS**

All transactions with related parties have been translated in the normal course of operations and have been measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. Related party transactions include transactions with Photon R&D, a private company owned or controlled by officers or directors of the Company. Photon R&D commenced providing engineering consulting and research and development services to the Company on October 1, 2008 and, as a result, the Company has substantially reduced its internal research and development operations.

The engineering, research and development expenses are provided from shared space provided by the Company. The Company charges Photon R&D premises and related expenses to recover the Company's costs. Amounts outstanding with Photon R&D are non-interest bearing, unsecured and due on demand.

| <u>Years ended December 31,</u>                | <u>2009</u> | <u>2008</u> |
|--|-------------|-------------|
| Balance Sheet:                                 |             |             |
| Accounts Receivable                            | \$ 626,419  | 468,470     |
| Note Receivable                                | 219,541     | -           |
| Accounts payable                               | 30,971      | 367,792     |
| Statement of operations:                       |             |             |
| Recovery of premises and related expenses      | 1,562,859   | 468,470     |
| Engineering, research and development services | 351,131     | 367,792     |
| Royalties                                      | 67,466      | -           |

The Company indemnifies its directors and officers against any and all claims or losses reasonably incurred in the performance of their service to the Company to the extent permitted by law. The Company has acquired and maintains liability insurance for directors and officers of the Company.

No stock options were granted to directors of the Company during the years ended December 31, 2009 and 2008.

## **SUBSEQUENT EVENTS**

In January 2010, and in accordance with the 3 year re-registration cycle, Photon successfully completed a stage 2 surveillance audit of the Company's Quality Management System to the ISO 9001:2008 standard.

As at April 22, 2010, Photon's order backlog stood at \$3.3 million, compared to \$3.5 million for Q4 2009.

In February 2010, the Company granted stock options to purchase an aggregate of 1,425,000 common shares of the Company at an exercise price of \$0.10 per share for a term of 5 years. The stock options were granted to directors and a consultant of the Company and are subject to any necessary regulatory approvals. An aggregate of 1,605,000 outstanding stock options, having original exercise prices ranging from \$0.145 to \$0.62 per share, were also repriced to \$0.10 per share for the balance of their respective terms, subject to any necessary regulatory and disinterested shareholder approvals. As at the date of this report, the Company had 4,937,500 issued and outstanding stock options.

## **CRITICAL ACCOUNTING POLICIES AND ESTIMATES**

The consolidated financial statements have been prepared in accordance with Canadian generally accepted accounting principles. A summary of the significant accounting policies used in the preparation of our financial statements is included in note 2 of the consolidated financial statements for the year ended December 31, 2009. The measurement of certain assets and liabilities is dependent upon future events, the outcome of which will not be fully known until future reporting periods. Therefore, the preparation of the consolidated financial statements requires management to make certain estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses. Actual results will vary from those estimated. Certain accounting policies are critical to understanding our reported financial results. These critical policies, which affect the reported amounts of revenue and the more significant areas involving management estimates, are described here.

### **Inventory**

Inventory consists of optical, mechanical and electronic components and finished goods and is valued at the lower of cost or net realizable value. Cost is determined on an actual FIFO cost basis and includes the cost of direct material, direct labour and other overhead costs. Labour costs are allocated to items based on actual labour hours input. Fixed and variable overhead are allocated to production activities in converting materials to finished goods.

### **Revenue Recognition**

Revenue from sales of products is recognized when goods are shipped and title passes, there is persuasive evidence of an arrangement, collection is probable and the fee is fixed and determinable. Cash collected prior to revenue recognition criteria being met is recorded as deferred revenue on the consolidated balance sheet.

### **Research and Development Costs**

Research costs are expensed as incurred. Development costs are expensed as incurred unless they meet the required criteria for deferral and amortization. There were no additional costs which were deferred in 2009, after deferring \$219,071 in 2008 relating to development of a portable sulphur analyzer product. The Company amortizes previously deferred development costs, commencing with commercial production, over the expected future benefit period based upon quantities delivered compared to expected levels contracted to be delivered. In 2009, commercial production was delayed and so the amount amortized in fiscal 2009 was only \$967 (2008-28,166). The Company has a balance of \$189,938, (2008-\$190,905) of deferred development expenses as at December 31, 2009.

### **Stock-based Compensation Plans**

The Company accounts for employee stock options using the fair value based method. Under the fair value based method, compensation cost attributable to options granted to employees and directors is measured at the fair value at the grant date using the Black-Scholes option pricing model. Compensation expense is recognized over the vesting period of the underlying option.

Any consideration paid by employees on exercise of stock options or purchase of stock is credited to share capital. No compensation cost is recognized for options that employees forfeit if they fail to satisfy the service requirement for vesting. Compensation expense is recognized for stock-based payments to non-employees using the fair value based method.

### **Warranty Provision Estimate**

The company accrues for the estimated obligation under warranty provisions at the time sales are recognized and any changes in estimates are recognized prospectively.

### **Financial Instruments**

The Company has classified its financial instruments as follows:

- Cash and cash equivalents and bank indebtedness, if any, as "held-for-trading".
- Trade accounts receivable and other amounts and due from related parties are classified as "loans and receivables".
- Accounts payable and accrued liabilities, amounts due to related parties and advances under credit facility are classified as "other financial liabilities".

All financial instruments are initially recognized at fair value and are subsequently accounted for based on their classification. The fair value of a financial instrument on initial recognition is the transaction price, which is the fair value of the consideration given or received. Subsequent to initial recognition, financial assets and liabilities classified as held-for-trading are measured at fair value with changes in fair value recorded in the Consolidated Statements of Operations. Financial assets classified as "loans and receivables" and "other financial liabilities" are carried at amortized cost using the effective interest rate method. The fair values are based on quoted market bid process if available, otherwise fair value is obtained using discounted cash flow analysis. Transaction costs that are directly attributable to the issuance of financial assets or liabilities are accounted for as part of the carrying value at inception, and are recognized over the term of the assets or liabilities using the effective interest method. The adoption of these standards did not have an impact on the classification and valuation of financial instruments.

### **CHANGES IN ACCOUNTING POLICIES INCLUDING INITIAL ADOPTION**

Recently adopted accounting pronouncements:

#### **Credit Risk and Fair Value of Financial Assets and Financial Liabilities**

In January 2009, the CICA issued EIC – 173, Credit Risk and the Fair Value of Financial Assets and Financial Liabilities. The guidance requires that an entity's own credit risk and the credit risk of the counterparty should be taken into account in determining the fair value of financial assets and financial liabilities, including derivative instruments. This guidance is applicable to fiscal periods ending on or after January 20, 2009. The adoption of this section did not have a material impact on the Company's consolidated financial statements.

#### **Financial Instruments, Disclosure and Presentation**

Effective January 1, 2009, the Company has adopted the enhanced disclosure requirements of amended CICA Section 3862, Financial Instruments - Disclosures. Refer to note 12 for fair value measurement disclosures using a fair value hierarchy that reflects the significance of the inputs in making the measurements.

### **Goodwill and Intangible Assets**

In February 2008, the CICA issued new CICA 3064, Goodwill and Intangible Assets, replacing CICA 3062, Goodwill and Other Intangible Assets, and CICA 3450, Research and Development Costs. Collectively, these changes bring Canadian practice closer to International Financial Reporting Standards ("IFRS") and U.S. GAAP. The effective date of adopting this standard for the Company is January 1, 2009. This standard is not expected to impact the Company's financial statements.

### **International Financial Reporting Standards**

The CICA's Accounting Standards Board has announced that Canadian publicly accountable enterprises will adopt IFRS as issued by the International Accounting Standards Board effective January 1, 2011. The Company is in the process of developing a plan for the implementation of IFRS and will assess the impact of the differences in accounting standards on the Company's consolidated financial statements.

The Company expects to make changes to processes and system before the 2011 fiscal year, in time to enable the Company to record transactions under IFRS for comparative purposes in the 2011 financial year reporting.

### **OUTLOOK, BUSINESS RISKS AND UNCERTAINTY**

#### **Sales Risks**

During the first half of 2009, customers in the Company's semi-conductor market had postponed orders as a consequence of a reduction of demand in their markets. In the final two quarters, Photon saw a recovery of demand from the semi-conductor market. Photon endeavours to reduce the risk of key client dependence by continuing its initiative to diversify its product range and develop relationships with new distributors for products for the oil and gas industry, low cost fibre optic temperature sensors and spectrometers.

#### **Going Concern Risk**

The Company's ability to continue as a going concern is dependant upon its ability to fund working capital and its ability to generate positive cash flows from operations. While the Company has made efforts to diversify the industries that it serves in an attempt to reduce the impact of a downturn on any one segment, there can be no assurance that the Company will be successful in doing so or that the Company would be able to secure funding on acceptable terms when required. The consolidated financial statements have been prepared by management on a going-concern basis which assumes the Company will continue in operation for the foreseeable future and will be able to realize its assets and settle its liabilities and commitments in the normal course of business. These financial statements do not reflect the adjustments to the carrying values of assets and liabilities and the reported expenses and balance sheet classifications that would be necessary should the going concern assumption become inappropriate.

#### **Outlook, Market, Competition, and Foreign Exchange Risk**

Although the economic climate made fiscal 2009 a challenging year, Photon demonstrated the resilience of the Company's business and ability to generate revenue for the foreseeable future, achieving profitable financial results in Q3 and Q4 2009 and making 2009 its first profitable year ever. Photon is encouraged by the level of fulfilled and received purchase orders in 2010, running well ahead of the level from a year earlier, which should result in continued revenue growth.

While there can be no assurance of the ability of the Company to penetrate target markets, the Company endeavours to limit the effects of risk factors, including the competition risks, through its strategic planning, management processes and by scanning trade publications. The Company continues to focus on securing consistent delivery of high quality and value-added services to its customers.

Market risk is the risk that changes in market prices such as foreign exchange rates and interest rates will affect the Company's net earnings or the values of financial instruments. The majority of the Company's sales revenues and trade receivables are denominated in United States dollars. As such, the Company may be subject to material, realized and unrealized exchange gains or losses resulting from above average changes in exchange rates between the Canadian and United States dollar. As at December 31, 2009, the Company did not utilize any forward exchange contracts to mitigate any of the risks as mentioned above. Photon manages its exposure to foreign currency fluctuation by maintaining Canadian and U.S. dollar bank accounts to offset foreign currency payables and planned expenditures. As at December 31, 2009, the Company was not exposed to significant credit or interest rate risk.

### **OUTSTANDING SHARE DATA**

As at December 31, 2009 and the date hereof, the Company had 101,352,018 common shares issued and outstanding. There were outstanding stock options to purchase an additional 4,330,000 common shares of the Company as at December 31, 2009 and 4,937,500 common shares of the Company as at the date hereof.

### **ADDITIONAL INFORMATION**

Additional information and other publicly filed documents relating to the Company are available through the Canadian Securities Administrators' System for Electronic Document Analysis and Retrieval ("SEDAR") which can be accessed at [www.sedar.com](http://www.sedar.com).