

**Multi-source Agreement (MSA) of  
40 Gbit/s Miniature Device (XLMD)**

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**XLMD12**

**Physical Interface of  
Optical Receiver Device Package**

**Rev. 1.0  
February 21, 2008**

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Description

This technical document has been created by the XLMD MSA committee. This document is offered to both users and suppliers of 40Gbit/s pigtail type optical devices as a basis for a technical agreement. However, it is not a warranted document. Each optical device supplier will have its own datasheet. If the users wish to find a warranted document, they should consult the datasheet of the chosen optical device supplier.

The MSA committee reserves the rights at any time to add, amend or withdraw technical data contained in this document.

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### Revision History

Revision	Date	Purpose/Changes
1.0	February 21, 2008	First public issue

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## 1 Scope

The XLMD MSA committee has created this technical document to specify the physical interface of optical receiver device package. The specifications were based on the investigation of PIN-TIA receiver with fiber pigtail.

## 2 Reference Document

[1] XLMD11

“Electrical & Optical Interfaces of Optical Receiver Devices”

[2] MIL-STD-348A NOTICE 5

“SMPM male full detent interface”

## 3 Abbreviations

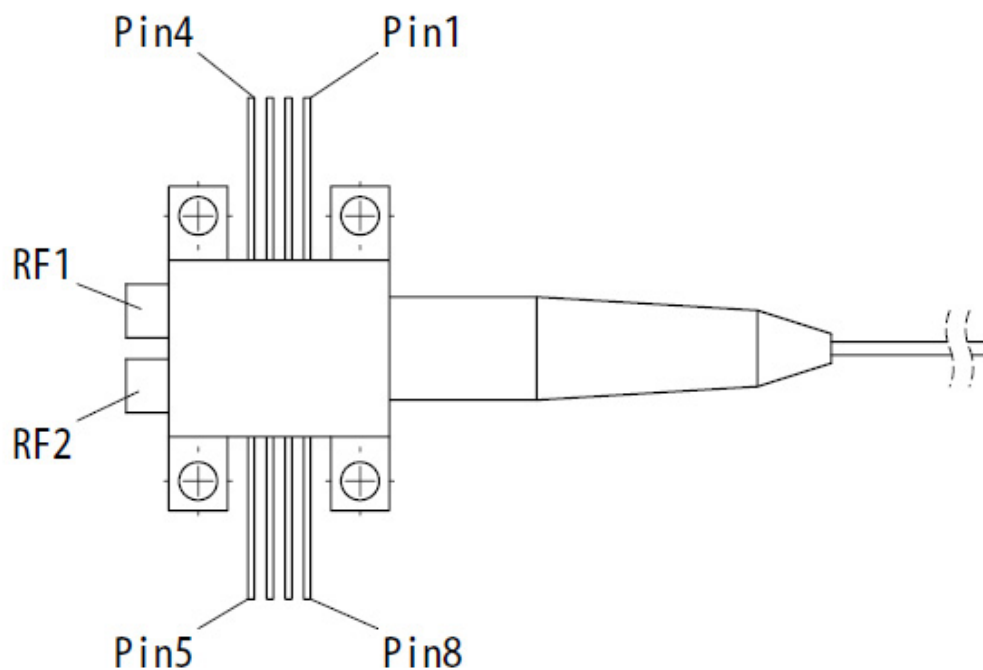
PD Photo diode

PIN PD Photo diode with PIN structure

TIA Trans-impedance amplifier

## 4 Electrical Interface

### 4.1 Numbering of electrical terminals



**Fig. 1 Electrical terminal numbering assignments**

## 4.2 Electrical terminal assignment

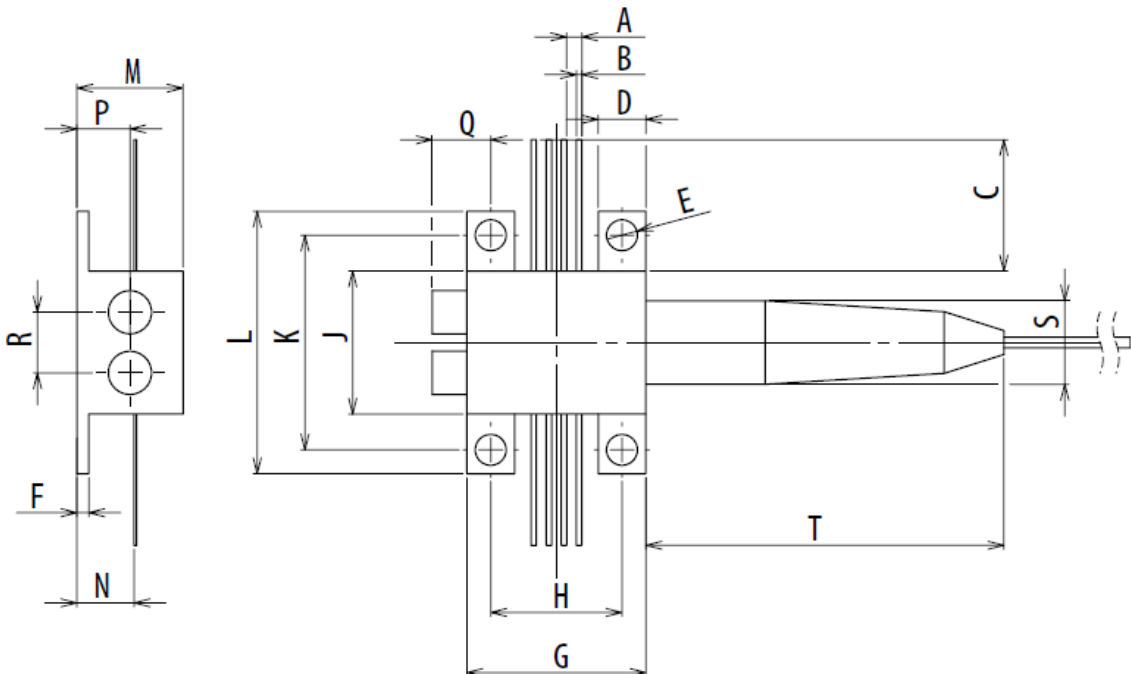
**Table 1 Terminal function definitions**

Terminal number	Function
1	Vpd: PD Cathode
2	Case Ground
3	Vendor Option
4	Vendor Option
5	Vendor Option
6	Vcc: TIA IC Supply Voltage
7	Case Ground
8	Reserved for Thermistor (Rth)
RF1	OUT or OUTB, defined by vendor
RF2	OUTB or OUT, defined by vendor

Note 1: Dual SMPM male full detent interface connectors are used for RF interface.

## 5 Mechanical Interface

### 5.1 Package outline



**Fig. 2 Package outline drawing**

**Table 2 Dimensions of the package outline**

Reference	Dimensions mm		Notes
	Minimum	Maximum	
A	1.27		Basic dimension
B	-	0.45	
C	10.0		
D	4.0		Basic dimension, Note 1
E	2.6		Diameter, Basic dimension
F	-	1.0	
G	15.0		Basic dimension, Note 1
H	10.9	11.1	
J	12.0		Basic dimension, Note 1
K	17.9	18.1	
L	22.0		Basic dimension, Note 1
M	-	8.9	
N	4.6	5.0	
P	4.45		Basic dimension
Q	4.65	5.15	(Typical 4.9 mm)
R	5.08		Basic dimension
S	-	7.0	Diameter
T	-	30	

Note 1: Unless specified, tolerance of each dimension is +/-0.25 mm.

Note 2: Optical connectors are defined by optical device suppliers.