

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

XLMD02

**Physical Interface of
Optical Transmitter Device Package**

**Rev. 1.0
February 21, 2008**

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 device 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.

Revision History

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

1 Scope

The XLMD MSA committee has created this technical document to specify the physical interface of optical transmitter device package. The specifications were based on the investigation of cooled EMwL device with built-in driver IC and fiber pigtail.

2 Reference Documents

- [1] XLMD01
“Electrical & Optical Interfaces of Optical Transmitter device”
- [2] MIL-STD-348A NOTICE5
“SMPM male full detent interface”

3 Abbreviations

EMwL	External modulator with laser diode
LD	Laser diode
PD	Photo diode
TEC	Thermo-Electric Cooler

4 Electrical Interface

4.1 Numbering of electrical terminals

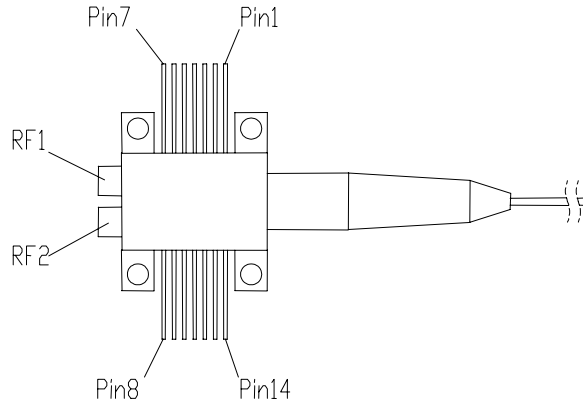


Fig. 1 Electrical terminal numbering assignments

4.2 Electrical terminal assignment

Table 1 Terminal function definitions

Terminal number	Function
1	LD Anode
2	PD Anode
3	Vb : Modulator bias
4	Vm : Modulator modulation
5	Vss : Driver IC supply voltage
6	Vx : Cross point control voltage
7	Vendor option
8	Vendor Option
9	Vendor Option
10	Case Ground
11	Vendor option (Reserved for Thermistor)
12	Thermistor
13	TEC Cathode
14	TEC Anode
RF1	IN or INB, defined by Vendor
RF2	INB or IN, defined by Vendor

Note 1: TEC acts as an EMwL chip-cooler in the bias direction described here. When it is biased reversely, its function is changed into heating.

Note 2: Dual SMPM male full detent interface connectors are used for RF interface.

5 Mechanical interface

5.1 Package outline

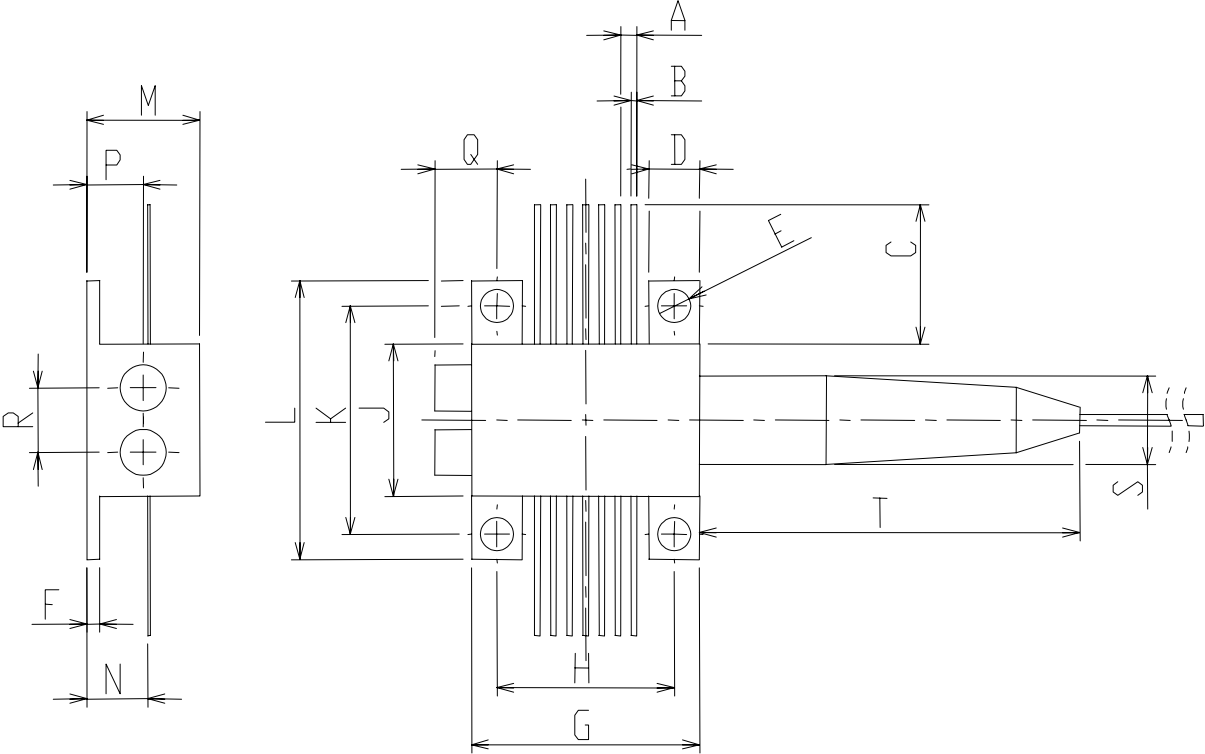


Fig. 2 Package outline drawing

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	18.0		Basic dimension, Note 1
H	13.9	14.1	
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 4.9mm)
R	5.08		Basic dimension
S	---	7.0	Diameter
T	---	30	

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

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