

OM5642W-30B**Preliminary**

40 Gb/s EA Modulator with Single Mode Fiber, Built-in Cooler

GENERAL DESCRIPTION

OM5642W-30B is a C-band electro-absorption (EA) modulator for 40 Gb/s operation with low PDL characteristics in a hermetic sealed package with a V connector.

ABSOLUTE MAXIMUM RATINGS(T_{op(c)} = 25°C, unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Operating Case Temperature	T _{op(c)}	0 to +70	°C
Applied Voltage Range	V _{op}	-5 to +1	V
Input Optical Power (peak power)	P _i	+13 ¹⁾	dBm
TEC Voltage	V _{pe}	4	V
TEC Current	I _{pe}	1.8	A

Exceeding these ratings may lead to immediate destruction or permanent deterioration of the device.

1) Applied voltage range: -5 V < V_{op} < +1 V

OPTICAL AND ELECTRICAL CHARACTERISTICS(at 1550 nm, optical input power 0 dBm, T_{sub} = 25°C)

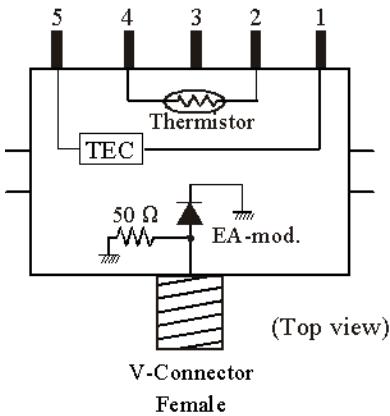
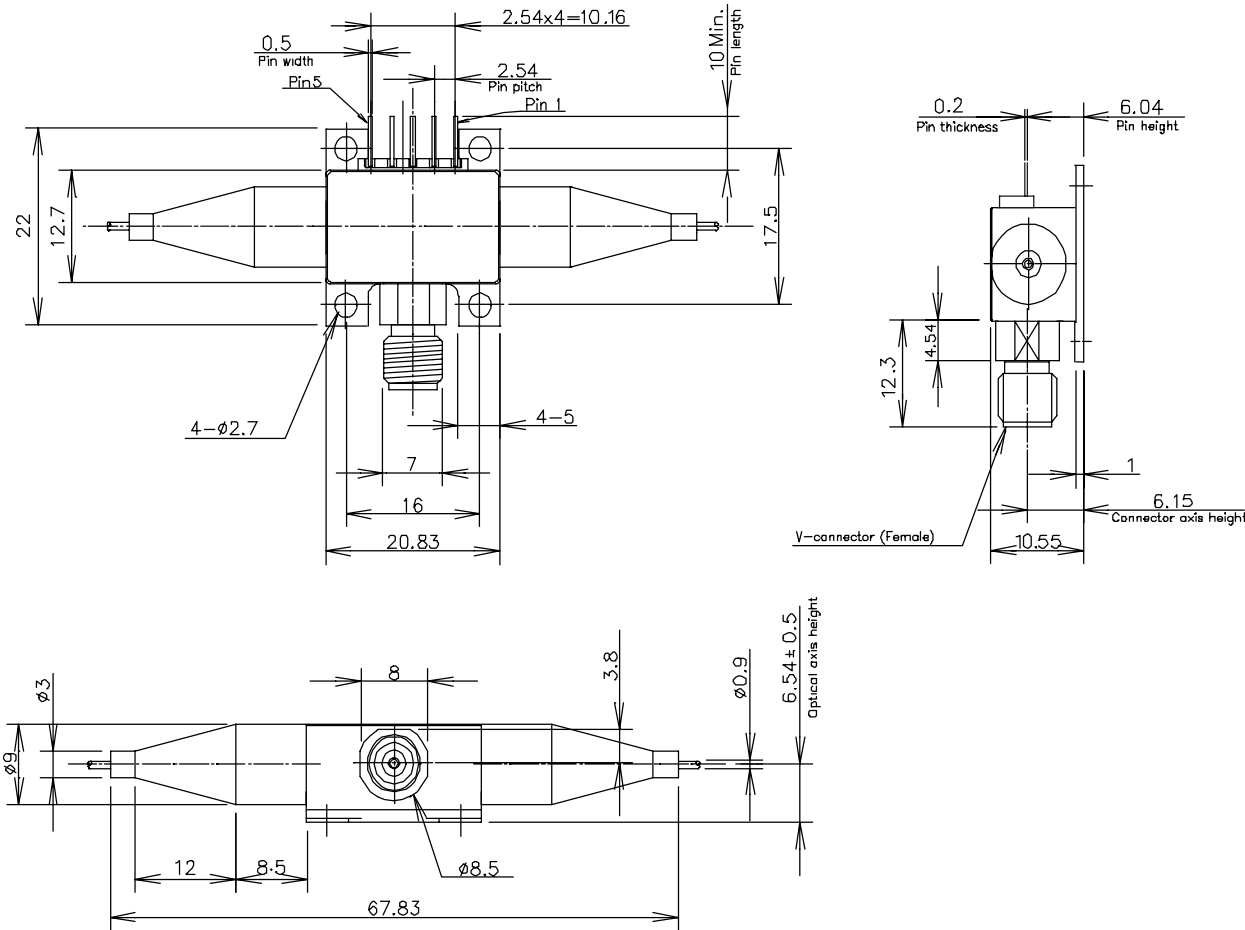
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Insertion Loss	L _{in}	CW, V _b = 0 V	—	9	10	dB
Polarization Dependence Loss	PDL	CW, V _b = 0 V	—	0.5	1.0	dB
Extinction Ratio	ExR	CW, 0 to -4 V	17	20	—	dB
Bandwidth (-3dB, electrical)	f _c	V _b = -1.2 V	30	—	—	GHz
TEC Current	I _{pe}	ΔT = 45°C	—	1	—	A
Thermistor Resistance	R _{th}	T _{thm} = 25°C	—	10	—	kΩ
Thermistor B Constant	B	—	—	3450	—	K

FIBER PIGTAIL SPECIFICATIONS

Parameter	Specifications	Unit
Type	SMF	—
Jacket Diameter	0.9	mm
Length	1 (Min.)	m
Connector	FC/SPC	—

OUTLINE DRAWING (All dimensions in millimeters)

Tolerances Unless Noted +/-0.5



Pinout

PIN	FUNCTION
1	TEC CATHODE
2	THERMISTOR
3	NC
4	THERMISTOR
5	TEC ANODE

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