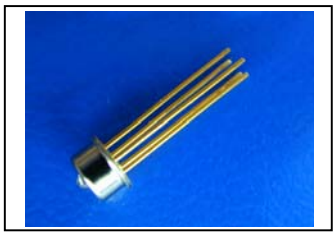
TMC-1C59-728

10Gbps InGaAs PIN plus Pre-amplifier

FEATURES:



- Industry standard TO-46 package with short cap lens and tab-less.
- Optimized for fiber optic application.
- Supports up to 11.3Gbps application.
- Photocurrent monitoring available.
- Single power supply +3.3V.

ELECTRO-OPTICAL CHARACTERISTICS: (T_A = 25°C)

PARAMETERS		SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Power Supply		V_{CC}	3.0	3.3	3.6	V	
Supply Current		I_{CC}		27	34	mA	no loads
Differential Responsivity		Rd	2.0	3.2	5.0	mV/μW	R_{load} = 100ohm, P = -15dBm, λ=1310nm
Single Ended Responsivity		Rs	1.0	1.6	2.5	mV/μW	R_{load} = 50ohm, P = -15dBm, λ=1310nm
TIA RSSI	Slope		0.9	1.0	1.1	mA/mA	
	Offset				100	nA	
	Linearity Limit				1.6	mA	
Small-Signal Bandwidth		BW	7.0			GHz	P = -15dBm(1)
Low-Frequency Cut off		LF			30	kHz	
Rise / Fall Time(20 % ~ 80 %)		tr/tf			50	ps	P = -15dBm, λ=1310nm(1)
Saturation Power		P_{Sat}	0.5			dBm	
Single Ended Output Impedance		R_O		50		ohm	
Wavelength		λ	1260		1620	nm	
Sensitivity					-17.0	dBm	λ=1310nm,@10.3125Gbps(1) PRBS 31, ER=7dB,BER=1E-12
					-15.5	dBm	λ=1310nm,@10.3125Gbps(1) PRBS 31, ER=4.5dB,BER=1E-12

Notes:
1. The spec and tested data are subject to ROSM level (flexible circuit attached) measurement.

ABSOLUTE MAXIMUM RATINGS:

PARAMETERS	MIN	MAX	UNIT	TEST CONDITIONS
Storage Temperature	-40	100	°C	
Operating Temperature	-40	85	°C	
Lead Solder Temperature		260	°C	10 seconds

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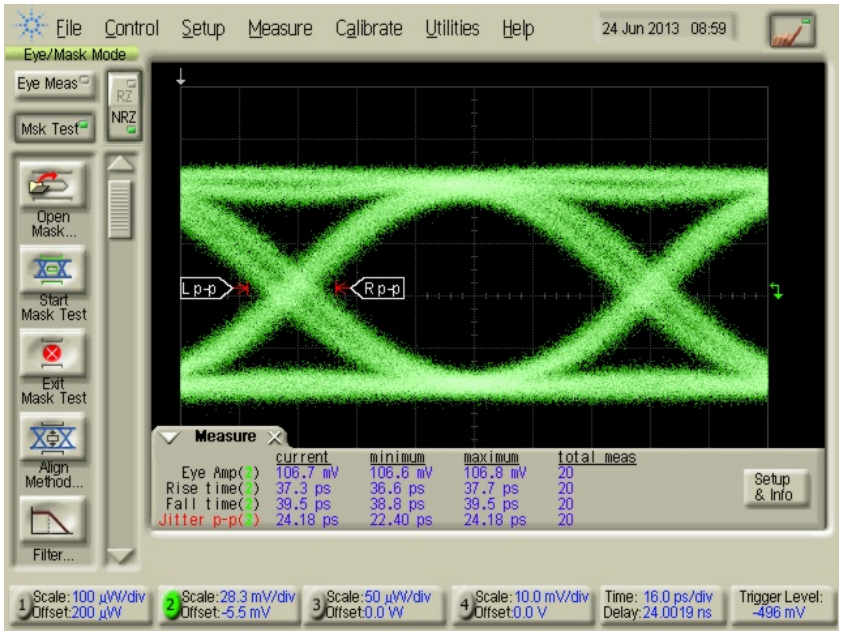
Eye Diagram：

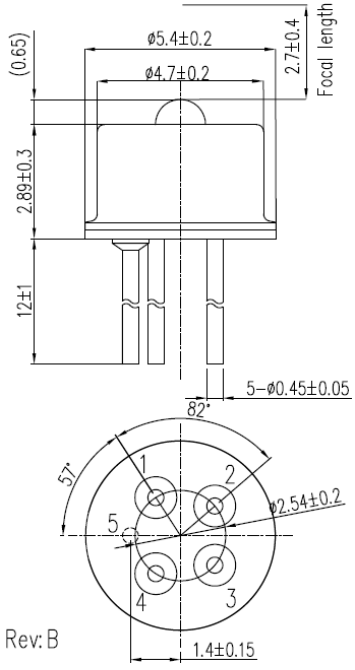
R_{load} = 50ohm, P = -15dBm@10.3125Gbps, 1310nm, PRBS 31. (1)



tr=37.3ps, tf=39.5ps, Jitter p-p=24.18ps

OUTLINE DIMENSIONS:

• Unit: mm



Pinout:

Pin no.	TMC-1C59-728
	Function
1	Dout(+)
2	Vcc
3	Isource
4	Dout(-)
5	Gnd

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