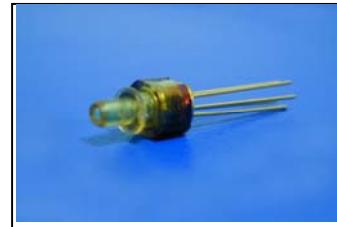


TTR-1F58-327/ TTR-1F58-427

LC Connectorized 850nm VCSEL plus Monitor PD

FEATURES:

- Pre-aligned LC-type receptacle for multi-mode fiber communication.
- Support up to 10.3125Gbps data rate operation.
- Design for small form factor transceivers.
- Isolation pin-out configuration.
- Comply with flexible interconnect.



ELECTRO-OPTICAL CHARACTERISTICS:

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS ⁽¹⁾
Threshold Current	I _{th}		1.0 2.0	1.5 2.5	mA	T _A =25°C T _A =85°C
Slope Efficiency	η	0.09		0.17	mW/mA	I _F =6mA
Rise / Fall Time(20 % ~ 80 %)	tr/tf		50		ps	I _F =6mA, ER=5dB
Wavelength	λ _P	840	850	860	nm	I _F =6mA ⁽²⁾
Forward Voltage	V _F	1.7		2.4	V	I _F =6mA
Spectral width (RMS)	Δλ			0.65	nm	I _F =6mA, T _A = -10~85°C
Relative Intensity Noise	RIN		-128		dB/Hz	I _F =6mA, f= 1GHz
Monitor Current	I _M	30		500	μA	V _R =5V, P _{oc} = 600μW ⁽³⁾
PD Dark Current	I _d			20	nA	V _R =5V, T _A = 25°C
PD Capacitance	C _M		12		pF	V _R =3v, f= 1MHz

THERMAL CHARACTERISTICS:

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
I _{th} Temperature Variation	ΔI _{th}			1.5	mA	T _A = -10~85°C
η Temperature Coefficient	Δη/ΔT		-0.4		%/°C	T _A = -10~85°C, I _F =6mA
λ _P Temperature Coefficient	Δλ _P /ΔT		0.07		nm/°C	T _A = -10~85°C, I _F =6mA
Tracking Error	TE	-1.5		1.5	dB	T _A = -10~85°C ⁽⁴⁾
Series Resistance	R _S	70	85		Ω	T _A = 25°C, I _F =6mA
	R _S	60			Ω	T _A = 85°C, I _F =6mA

Notes:

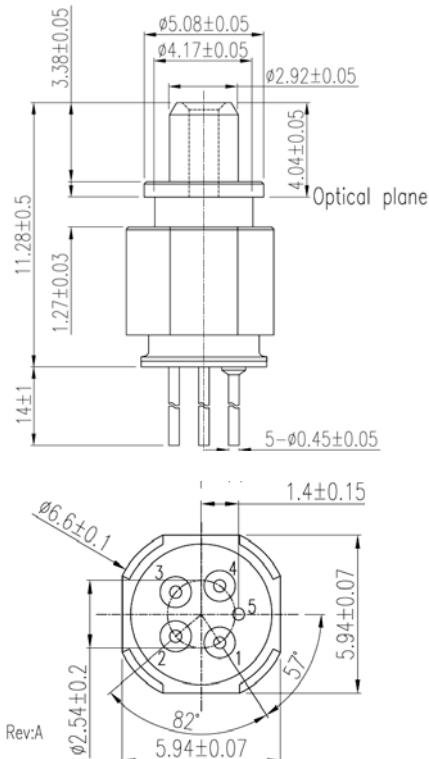
1. All parameters are measured at I_F=6mA, 25°C unless otherwise stated.
2. Minimum and Maximum values are valid over the entire ambient temperature range.
3. P_{oc}=Coupled Optical Power, be measured with a multi-mode 50/125μm fiber and ambient temperature 25°C.
4. CW, Im=Constant (@Po= I_{th} +4mA, 25°C), TE=10log[(Po@T_A)/(Po@25°C)]

ABSOLUTE MAXIMUM RATINGS:

PARAMETERS	MIN	MAX	UNIT	CONDITIONS
Storage Temperature	-40	100	°C	
Operating Temperature	-10	85	°C	
Lead Solder Temperature		260	°C	10 seconds
Peak Continuous Forward Current		10	mA	
Laser Reverse Voltage		10	V	

OUTLINE DIMENSIONS:

• Unit: mm

**Pinout:**

Pin Number	TTR-1F58-327	TTR-1F58-427
	Function	Function
1	VCSEL Cathode	VCSEL Anode
2	PD Cathode	PD Cathode
3	PD Anode	PD Anode
4	VCSEL Anode	VCSEL Cathode
5	Case	Case

**WARNING:**

The VCSEL is a class 1M laser in the safety standard
ANSI Z136.1 and should be treated as a potential eye hazard.