

TTF-1F67-427

25Gbps LC Connectorized 850nm VCSEL plus Monitor PD with FPC

FEATURES:

- LC-type optical sub-module with flexible circuit attached.
- Support up to 25.78125Gbps data rate operation.
- Isolated pinout.



ELECTRO-OPTICAL CHARACTERISTICS:

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Threshold Current	I_{th}			1.2	mA	$T_A = 25^{\circ}\text{C}$
Forward Voltage	V_F		2.2		V	$I_F = 6.5\text{mA}$
Slope Efficiency	η		0.14		mW/mA	$I_F = 6.5\text{mA}$
Series Resistance	R_s		100		Ω	$I_F = 6.5\text{mA}$, $T_A = 25^{\circ}\text{C}$
Wavelength	λ_p	840	850	860	nm	$I_F = 6.5\text{mA}$
Spectral width(RMS)	$\Delta\lambda$			0.6	nm	$I_F = 6.5\text{mA}$, $T_A = 0\sim 70^{\circ}\text{C}$
Relative Intensity Noise	RIN			-128	dB/Hz	$I_F = 6.5\text{mA}$
Monitor Current	I_M	100		1000	μA	$V_R = 5\text{V}$, $I_F = 6.5\text{mA}$
PD Dark Current	I_d			50	nA	$V_R = 5\text{V}$, $T_A = 25^{\circ}\text{C}$
PD Capacitance	C_M		12		pF	$V_R = 3\text{V}$, $f = 1\text{MHz}$

THERMAL CHARACTERISTICS:

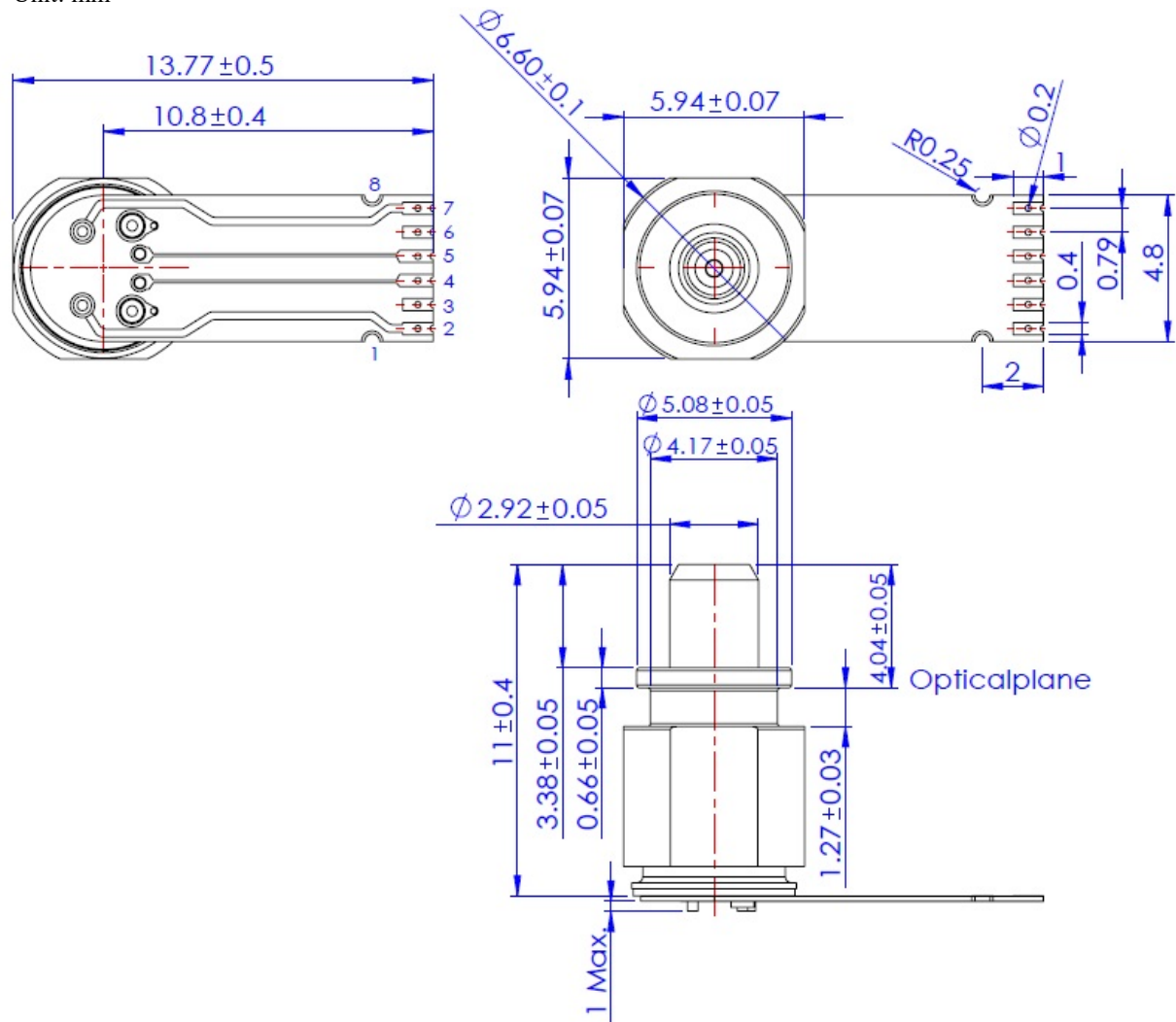
PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
η Temperature Coefficient	$\Delta\eta/\Delta T$		-0.5		%/ $^{\circ}\text{C}$	$T_A = 0\sim 70^{\circ}\text{C}$, $I_F = 6.5\text{mA}$
λ_p Temperature Coefficient	$\Delta\lambda/\Delta T$		0.06		nm/ $^{\circ}\text{C}$	$T_A = 0\sim 70^{\circ}\text{C}$, $I_F = 6.5\text{mA}$
Tracking Error	TE	-1.5		1.5	dB	$T_A = 0\sim 70^{\circ}\text{C}$

ABSOLUTE MAXIMUM RATINGS:

PARAMETERS	MIN	MAX	UNIT	TEST CONDITIONS
Storage Temperature	-40	85	$^{\circ}\text{C}$	
Operating Temperature	0	70	$^{\circ}\text{C}$	
Lead Solder Temperature		260	$^{\circ}\text{C}$	10 seconds
Peak Continuous Forward Current		12	mA	
Laser Reverse Voltage		5	V	

OUTLINE DIMENSIONS:

• Unit: mm



Pinout:

Pin Number	Function
1	GND
2	MPD Cathode
3	Case/Gnd
4	VCSEL Cathode
5	VCSEL Anode
6	Case/Gnd
7	MPD Anode
8	GND

The VCSEL Laser is a class 1 laser in the safety standard IEC60825-1:2014.

