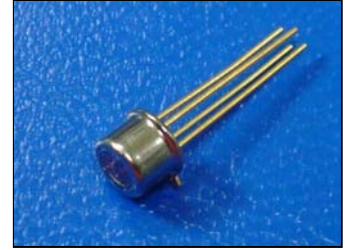


TMC-5F45-357/-427

High speed VCSEL TO-46 metal can with monitor PD

FEATURES:

- Industry TO-46 package of flat window for multi-mode fiber communication.
- Packaged with monitoring PD.
- High coupling efficiency for multi-mode fibers.
- Support from DC to 4.25Gbps data rate operation.
- Isolation pin-out configuration (-357/-427)



ELECTRO-OPTICAL CHARACTERISTICS:

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS ⁽¹⁾
Threshold Current	I_{th}		1.5	2.75	mA	
Slope Efficiency	η	0.08	0.12	0.16	mW/mA	$I_F=6$ mA
Monitor Current	I_M	200		800	uA	$P_o=500 \mu W$
PD Capacitance	C_{PD}		12		pF	$V_R=3V$ @1MHz
Forward Voltage	V_F	1.6	1.8	2.1	V	$I_F=6$ mA
Series Resistance	R_S		45	60	Ω	$I_F=6$ mA
Wavelength	λ_p	830	850	860	nm	$I_F=6$ mA ⁽²⁾
Spectral width (RMS)	$\Delta\lambda$			0.85	nm	$I_F=6$ mA

Notes:

1. All parameters except mentioned are measured at $I_F=6$ mA, 25°C, CW.
2. Minimum and Maximum values are valid over the entire ambient temperature range .

THERMAL CHARACTERISTICS:

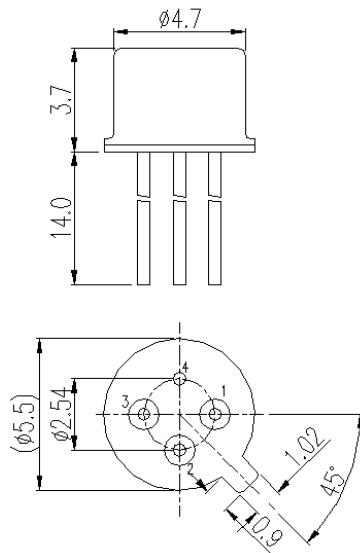
PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
I_{th} Temperature Variation	ΔI_{th}	-1.5		1.5	mA	$T_A=0\sim 70^\circ C$
V_F Temperature Coefficient	$\Delta V_F/\Delta T$		-2.5		mV/°C	$T_A=0\sim 70^\circ C$, $I_F=6$ mA
η Temperature Coefficient	$\Delta\eta/\Delta T$	-0.6			%/°C	$T_A=0\sim 70^\circ C$, $I_F=6$ mA
λ_p Temperature Coefficient	$\Delta\lambda_p/\Delta T$		0.06		nm/°C	$T_A=0\sim 70^\circ C$, $I_F=6$ mA

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
Continuous Forward Current		20	mA	
Continuous Reverse Voltage		10	V	

• Outline dimension (unit:mm)

UNIT:mm

**Pinout**

Pinout number	TMC-5F45-357	TMC-5F45-427
	Function	Function
1	VCSEL anode	VCSEL cathode
2	VCSEL cathode	VCSEL anode
3	PD cathode	PD cathode
4	PD anode/ case	PD anode/ case