



## RDT3FE-02N-R8C-FLC

### 10G 1310nm FP Pluggable Laser Diode Module

#### 1. Description

RDT3FE-02N-R8C-FLC product is designed for high speed, high performance data communication and telecommunication applications. It is integrated with 1310nm MQW-FP laser diode and LC/PC connector. The FP laser diode has included InGaAs monitoring PD and ball lens cap. The product is designed for 10G 10km transmission in SFP+/XFP transceiver.

#### 2. Features

- 2.1 Coaxial Pluggable package with LC
- 2.2 Data rate up to 10Gbps
- 2.3 1310nm typical emission wavelength
- 2.4 Commercial-grade applications
- 2.5 Excellent performance and reliability

#### 3. Applications

- 3.1 10G BASE-SR
- 3.2 10G Gigabit Ethernet
- 3.3 SDH/SONET OC-192

#### 4. Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Comments
Operating Temperature	$T_{op}$	0	70	°C	
Storage Temperature	$T_{stg}$	-40	85	°C	
Storage and Operating Humidity	-	5	85	%	
LD Forward Current	$I_{LD}$	-	120	mA	
LD Reverse Voltage	$V_{RL}$	-	2	V	
PD Forward Current	$I_{FD}$	-	2	mA	
PD Reverse Voltage	$V_{RD}$	-	15	V	
Lead Soldering Temperature/Time	$T_{sld}/t$	-	260/10	°C/s	Temperature/Time
ESD Threshold	ESD	-	300	V	HBM

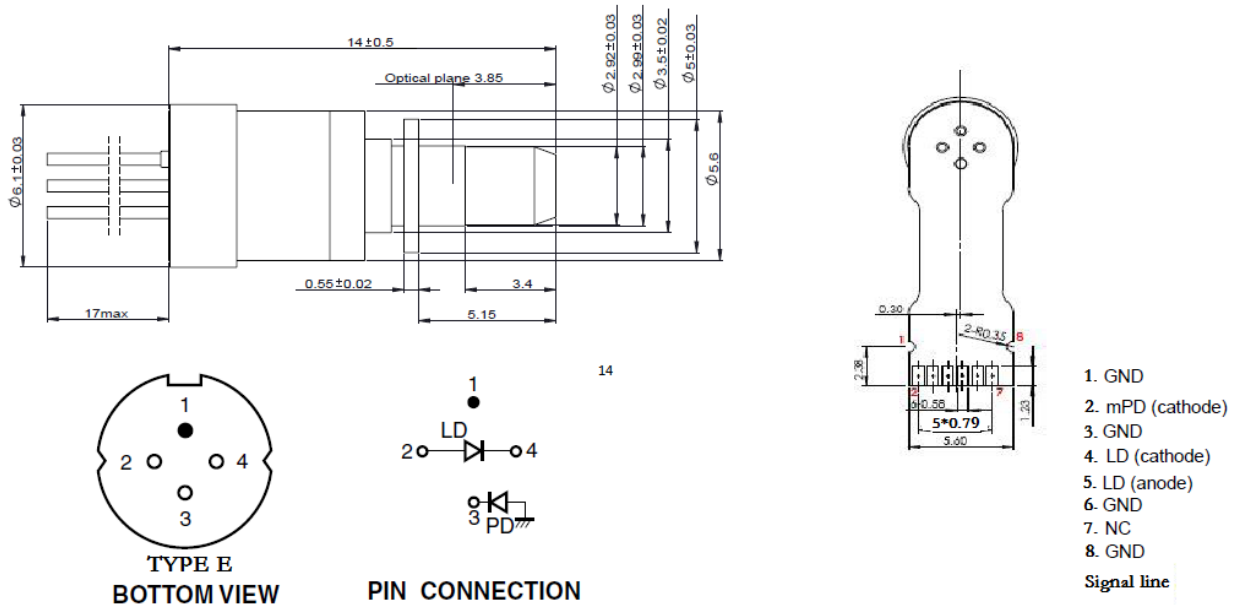


## 5. Optical and Electrical Characteristics( $T_c=25 \pm 3 \text{ }^\circ\text{C}$ , unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Output Power	Pf	0.2	-	0.6	mW	CW, $I_{op}=I_{th}+20\text{mA}$
Threshold Current	$I_{th}$	-	10	15	mA	CW
Forward Voltage	$V_f$	-	-	2.0	V	CW, $I_{op}=I_{th}+20\text{mA}$
Center Wavelength	$\lambda$	1290	1310	1330	nm	CW, $I_{op}=I_{th}+20\text{mA}$
Spectrum Width	$\Delta \lambda$	-	-	3.0	nm	CW, $I_{op}=I_{th}+20\text{mA}$
Tracking Error (Note 1)	TE	-1.0	-	1.0	dB	$T_c=0\sim 70 \text{ }^\circ\text{C}$
Monitor Current	$I_m$	50	-	1000	uA	CW, $I_{op}=I_{th}+20\text{mA}$ , $V_R=1.5\text{V}$
Monitor Dark Current	$I_D$	-	-	10	uA	$V_R=3.3\text{V}$
Data Rate	Br	10	-	-	Gbps	CW, $I_{op}=I_{th}+20\text{mA}$ , $\lambda=1310\text{nm}$

Note1:  $I_m$  hold(@ $I_{th}+20\text{mA}$ ,  $25 \text{ }^\circ\text{C}$ ),  $TE = 10\log(P_{Tc} / P_{25})$ ,  $T_c=0\sim 70 \text{ }^\circ\text{C}$ , AP

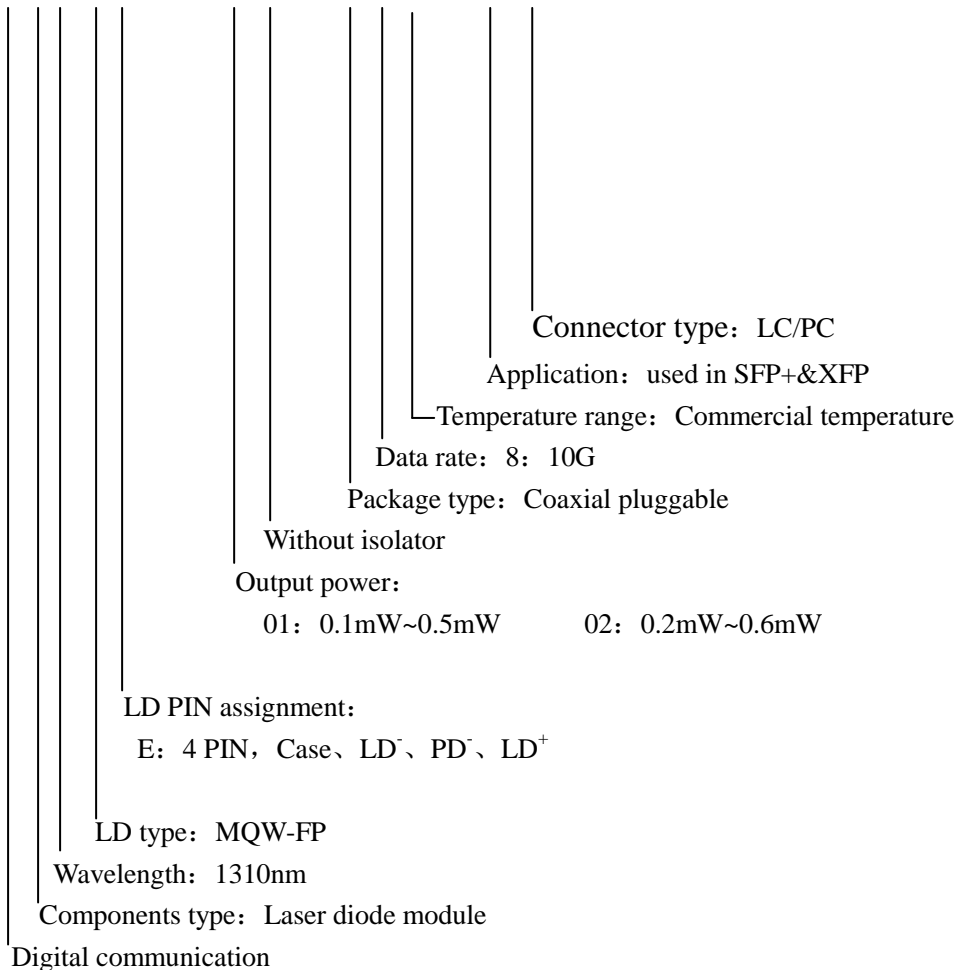
## 6. Package Information & Pin Definitions





## 7. Ordering Information

RDT 3 F E — 02 N — R 8 C — F LC



## 8. Warning

- 8.1 Radiation emitted by laser devices can be dangerous to the eyes. Avoid eye or skin exposure to direct or scattered radiation.
- 8.2 Handled in the same manner as ordinary semiconductor devices to prevent the electro-static damages. For safekeeping and carrying, the modules should be packaged with ESD proof material. To assemble the modules on PCB, the workbench, the soldering iron and the human body should be grounded.
- 8.3 Pay special attention to the atmosphere condition because the dew on the module may cause some electronic damages.
- 8.4 Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.