

High Extinction Ratio InGaAs Photodetector Module

SC Connector Receptacle Package Preliminary Specifications

Features

- High responsivity at 1300 nm
- Bandwidth greater than 1 GHz
- High extinction ratio
- Rugged coaxial package

Applications

- Fiber optic receivers
 - Passive optical networks
 - Test & measurement equipment

Preliminary Specifications

Optical / Electrical Characteristics

(@ 25°C, $V_R = 5V$ Unless otherwise noted.)

High Extinction Ratio

InGaAs Photodetector Module

EPM601RSC

Parameter	Min.	Typ.	Max.	Units
Active Diameter		75		μm
Responsivity @ 1300 nm ¹	0.75	0.80		A/W
Extinction Ratio ²	500	1000		
Dark Current		0.15	0.6	nA
Total Capacitance ³				
@ 5V		1.1	1.2	pF
@ 2.5V		1.2	1.3	pF
Bandwidth ⁴		1.5		GHz
Rise Time ⁵		200		ps

Notes:

¹ Measured with 50 μm , 0.2 N.A., graded index fiber.

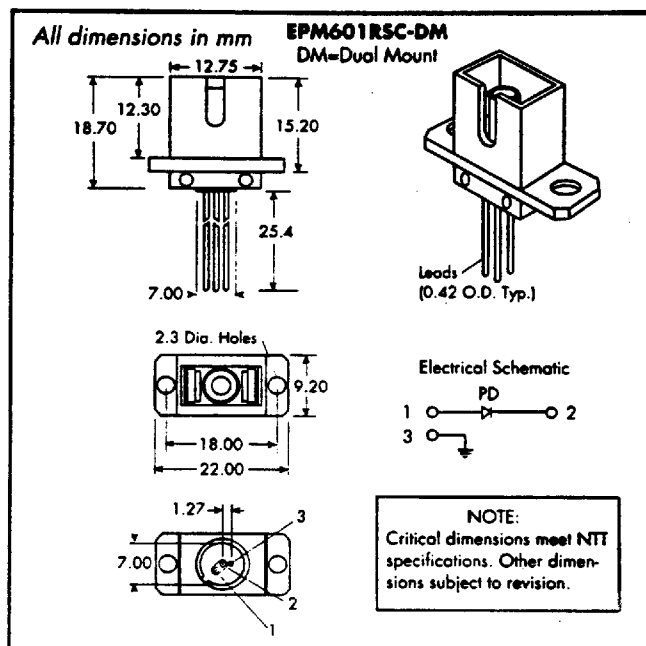
Expect 0.75 A/W minimum responsivity with singlemode fiber.

² $V_R = 3V$. Ratio is $I(\text{one}) / I(\text{zero})$ out of photodiode 20ns after pulse turned off. 50/125 μm MMF used.

³ Measured with case and cathode connected

⁴ -3 dB point into a 50 Ω load

⁵ $R_{L_{opt}} = 50 \Omega$



Maximum Ratings

EPM601RSC

Parameter	Rating	Units
Reverse Voltage	25	V
Reverse Current ^A	10	mA
Forward Current ^B	10	mA
Operating Temperature	-40 / +85	°C
Storage Temperature	-40 / +85	°C

Notes:

^A Under reverse bias, current at which device may be damaged.

^B Under forward bias, current at which device may be damaged.

Figure 1

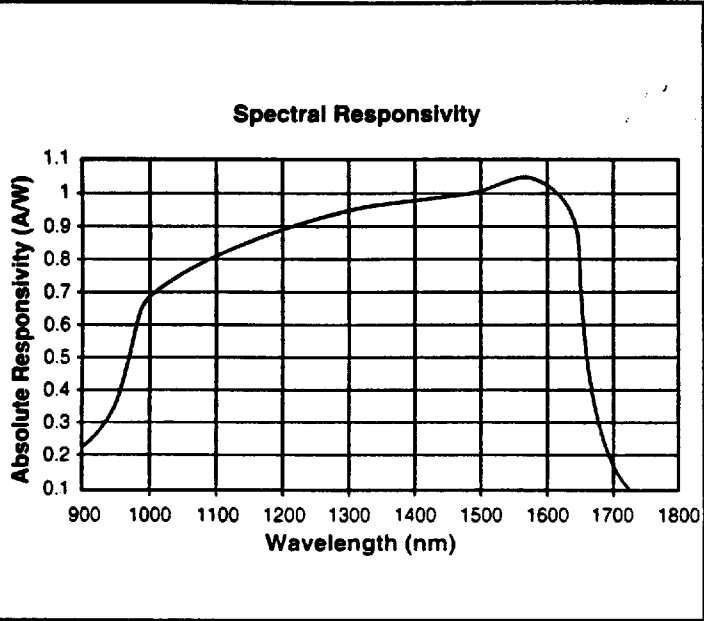


Figure 2

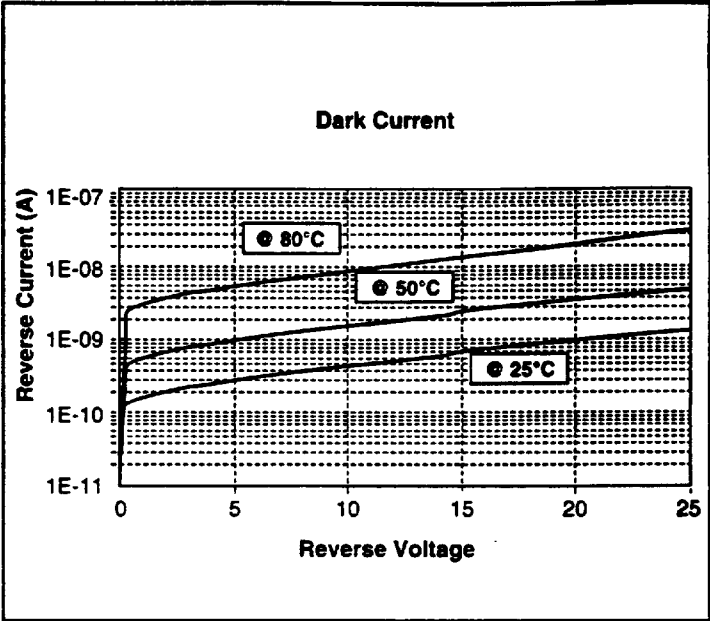


Figure 3

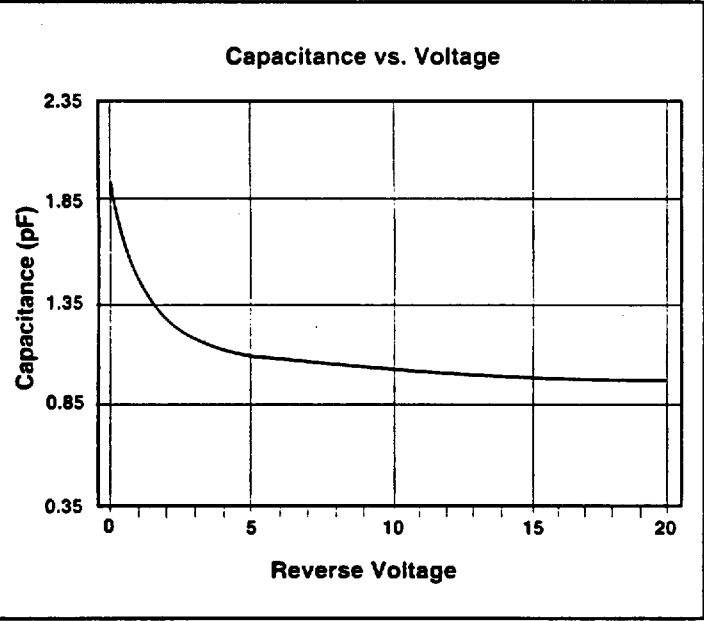
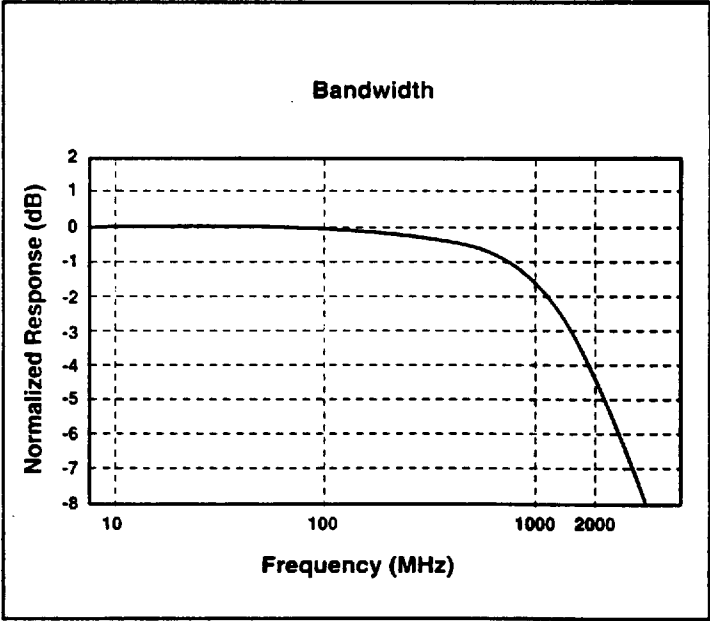


Figure 4



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