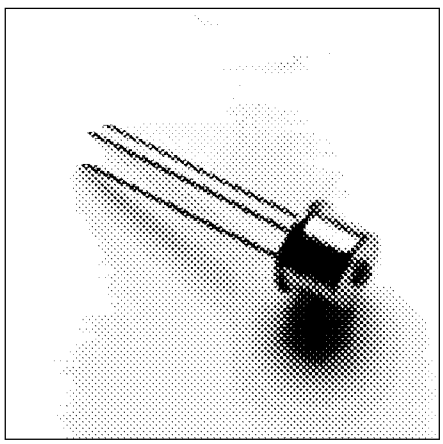
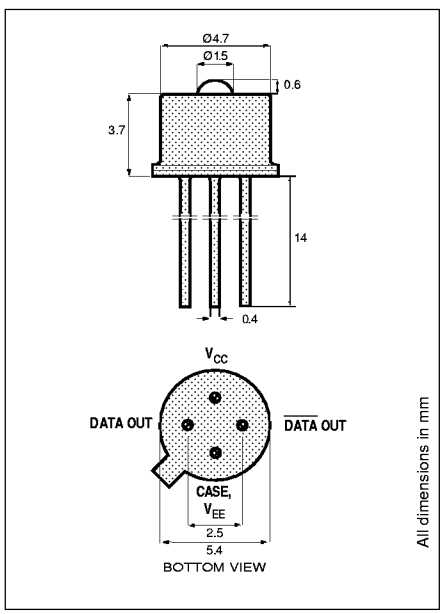
850nm **8C478** PIN/Preamp | **Datacom** | PRELIMINARY/P

This device contains a PIN photodiode and a low noise transimpedance amplifier with Automatic Gain Control (AGC) assembled in a TO-46 package. It is designed for Fibre Channel and Gigabit Ethernet. Its optical system is designed for single-mode fiber as well as for multimode fiber with core diameter up to 62.5µm. It is designed for both 3.3V and 5V supply.





TO-46 Package With Lens

Optical and Electrical Characteristics (25° C Case Temperature)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Responsivity, single differential	R		2.2 4.4		kV/W	λ=850 nm P < -20 dBm
Output Voltage (single)	V_o	150	200	260	mV	R_{LOAD} 50 Ω (AC)
Bandwidth ($3dB_{el}$)	f_c	0.8	1.2		GHz	
Noise-Equivalent Power	*NEP*		500		nW	λ=850 nm
Sensitivity (BER 10^{-9})	S		-24		dBm	λ=850 nm Extinction Ratio=0
Dynamic Range			25		dB	
Output Resistance (single)	R_o	40	50	60	Ω	
Power Supply Current	I_{DD}		35	62	mA	

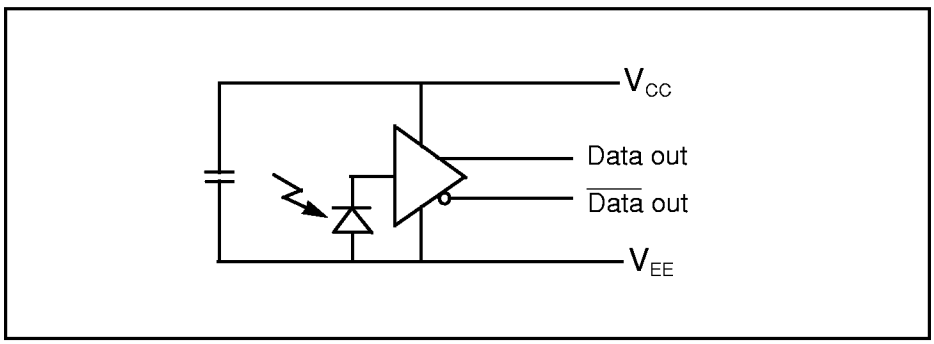
Operating Conditions: See table below. Fiber: Single-mode to multimode 62.5/125µm.

Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Supply Voltage	V_{CC}-V_{EE}	0	6.0	V
Operating Temperature	T_{op}	0	70	°C
Storage Temperature	T_{stg}	-40	125	°C

Recommended Operating Conditions

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V_{CC}-V_{EE}	3.0		5.5	V
Output Differential Load	R_L		100		Ω



Functional schematic

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