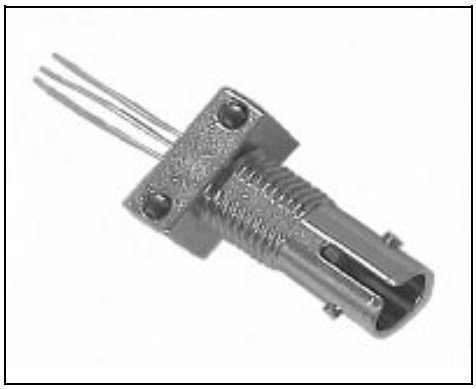
28 January 1998

HFE8500-022/XBA

1300 nm SLED

FEATURES

- InGaAsP Surface Emitting LED
- 115 MHz operating bandwidth
- Mounted in industry standard ST*-LP fibre connector



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DESCRIPTION

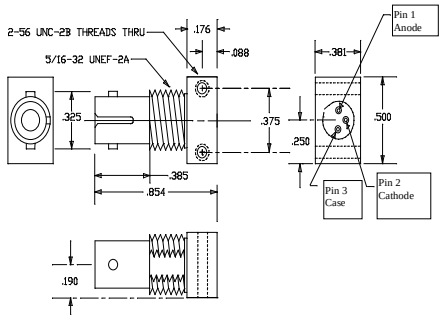
The HFE8500-022/XBA is a high-performance InGaAsP surface emitting LED that offers high coupling powers in 1300 nm fiber optic transmission applications. The LED is mounted in an industry standard low profile ST connector receptacle, optimized for low cost multimode systems where high bandwidth and long distance links are required.

APPLICATION

The HFE8500-022/XBA employs a high speed 1300 nm SLED packaged in a TO-18 metal can and opticaly aligned within a low profile ST connector receptacle. Data rates can vary from DC to 115 MHz depending upon component application. The LED is designed to convert electrical energy into optical output power that can be used in fiber optic communications and other applications. As the drive current varies above the component's threshold the optical output increases proportionally.

The HFE8500-022/XBA is designed to be used with inexpensive silicon or gallium arsenide detectors in 1300 nm multimode applications but can also be used in some singlemode systems.

OUTLINE DIMENSIONS in inches (mm)



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Pin 1 identified by red sleeve

ST is a registered trademark of AT & T.

Honeywell

Honeywell reserves the right to make changes in order to improve design and supply the best products possible.

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ELECTRO-OPTICAL CHARACTERISTICS (Tests made at 25°C unless otherwise specified)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Fiber Coupled Power	P_{OC}	20 -17	30 -15		dBM	I_F = 100 mA (1) 50/125 µm fibre
Forward Voltage	V_F		1.4	1.7	V	I_F = 100 mA
Peak Wavelength	λ_P	1290	1300	1350	nm	
Spectral Bandwidth	$\Delta\lambda$			170	nm	
Response Time						
-40 < T < +100°C, 10-90%	t_R		2.5	4.0	ns	I_F = 100 mA, 50% duty cycle,
-40 < T < +100°C, 90-10%	t_F		2.5	4.0	ns	f = 12.5 MHz
Analog Bandwidth	BWE		115		MHz	
P_O Temperature Coefficient	$\Delta P_O/\Delta T$		-0.03		dBm/°C	-40°C to +85°C
Capacitance	C		15	50	pF	f = 100 MHz, V_F = 0 V

Notes

1. This product is tested with a 50/125 micron fiber.

ABSOLUTE MAXIMUM RATINGS

Storage temperature	-40 to +100°C
Case operating temperature	-40 to +70°C
Lead solder temperature	260°C, 10 sec.
Forward current	150 mA
Reverse voltage	2 V

Stresses greater than those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational section of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods of time may affect reliability.

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ORDER GUIDE

Description	Catalog Listing
1300 nm LED	HFE8500-022/XBA

CAUTION

The inherent design of this component causes it to be sensitive to electrostatic discharge (ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product.

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