66215 FIBER OPTIC SCHMITT-TRIGGER WITH TTL OUTPUT/SMA HOUSING

PRELIMINARY DATA

ALL DATA ON THIS SHEET IS PRELIMINARY AND SUBJECT TO CHANGE

Mii

OPTOELECTRONIC PRODUCTS DIVISION

Revision - 5/25/01

Features:

- Industry standard SMA style connector
- High input sensitivity less than 2 uW
- Data speeds to 200 kbps NRZ
- Spectrally matched for LED's in the 850 to 880 nm range

Applications:

- Short haul data Link
- Mobile Communications
- Local Area Networks

DESCRIPTION

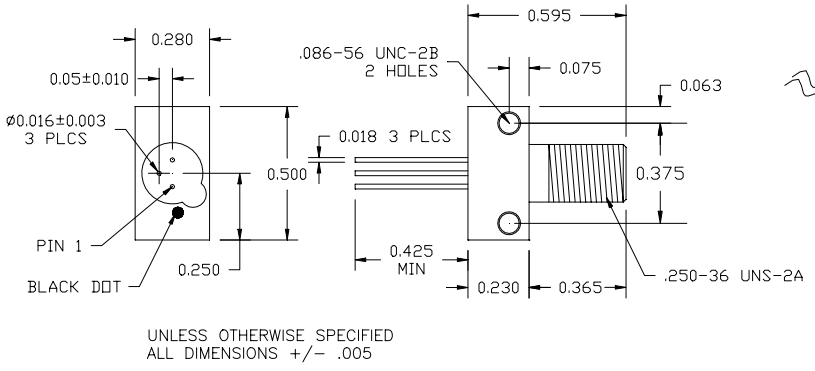
The ***66215*** series, receiver contains an 18 mil X 18 mil active area photodiode coupled to a trans-impedance amplifier that converts the light generated to a voltage level. This voltage is compared to an internal threshold of a schmitt trigger circuit that provides a sharp output transition even for slowly varying light levels. Optical switch point is typically less than 2 μW. An internal output buffer stage provides true TTL logic levels with rise and fall times typically in the 6-10 ns range. The receiver is designed to interface with multi-mode optical fibers from 50 to 100 microns. These LED's convert electrical current into optical power that can be used in fiber optic communication. This receiver may be screened to specific customer requirements or MIL-PRF19500.

ABSOLUTE MAXIMUM RATINGS 25°C FREE AIR TEMPERATURE UNLESS NOTED

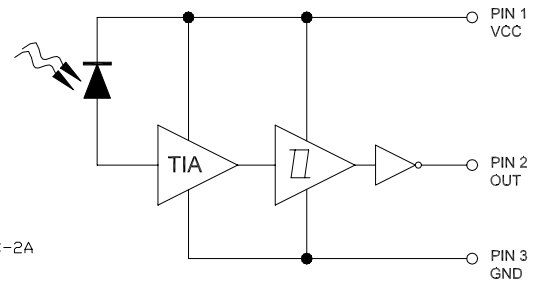
Storage Temperature ..... -55°C to +150°C
Operating Temperature ..... -40°C to +85°C
Input Voltage ..... 5.5 Vdc
Soldering Temperature (1/16 inch from case for 10 seconds) ..... 240°C

NOTES:

Package Dimensions



Schematic Diagram



ELECTRICAL CHARACTERISTICS

T_A = 25°C unless otherwise specified.

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS	NOTE
Supply voltage	Vcc	4.5	5	5.25	V		
Input current	Iin			8	Ma.	Vcc = 5 V	
Receiver Sensitivity	R	1.5	1	2	μW	850 nm LED, 100/125 micron fiber na .29	
Propagation Delay	Tpdl, Tphl			4	μs	3 μW peak input power 850 nm	
Output Rise Time	tr		8	15	ns	C=15 pf	
Output Fall Time	tf		6	10	ns	C=15 pf	
Output High	Voh	2.7	3.4			Ioh = -.4 ma.	
Output Low	Vol		.35	0,5	V	Iol = 4 ma. Vcc = 5.25 V	

NOTES:

RECOMMENDED OPERATING CONDITIONS:

PARAMETER	SYMBOL	MIN	MAX	UNITS
Supply Voltage	Vcc	4.5	5.25	mA

SELECTION GUIDE

PART NUMBER	PART DESCRIPTION	P_O Range
TBD	TBD	