



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# Fiber Optic Transmitter

## OPF345 Series



### Features:

- Low Cost 850 nm LED technology
- Electrically isolated plastic cap package
- High thermal stability
- High optical coupling efficiency to multimode fiber
- Industrial temperature range
- 75 MHz Bandwidth



### Description:

The OPF345 series fiber optic transmitters are high performance devices packaged for data communication links. This transmitter is an 850 nm GaAlAs LED and is specifically designed to efficiently launch optical power into fibers ranging in size from 50/125µm up to 200/300µm diameter fiber. Multiple power ranges with upper and lower limits are offered which allows the designer to select a device best suited for the application.

This product's combination of features including high speed and efficient coupled power makes it an ideal transmitter for integration into all types of data communications equipment.

### Applications:

- Industrial Ethernet equipment
- Copper-to-fiber media conversion
- Intra-system fiber optic links
- Video surveillance systems

Typical Coupled Power $I_f = 100\text{mA}, 25^\circ\text{C}$						
Fiber Size	Type	N.A.	OPF345A	OPF345B	OPF345C	OPF345D
50/125 µm	Graded Index	0.20	25µW	18µW	12.5µW	7.5µW
62.5/125 µm	Graded Index	0.28	45µW	34µW	22µW	14µW
100/140 µm	Graded Index	0.29	125µW	95µW	62µW	38µW
200/300 µm	Step Index	0.41	475µW	340µW	235µW	140µW



RoHS

General Note  
TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

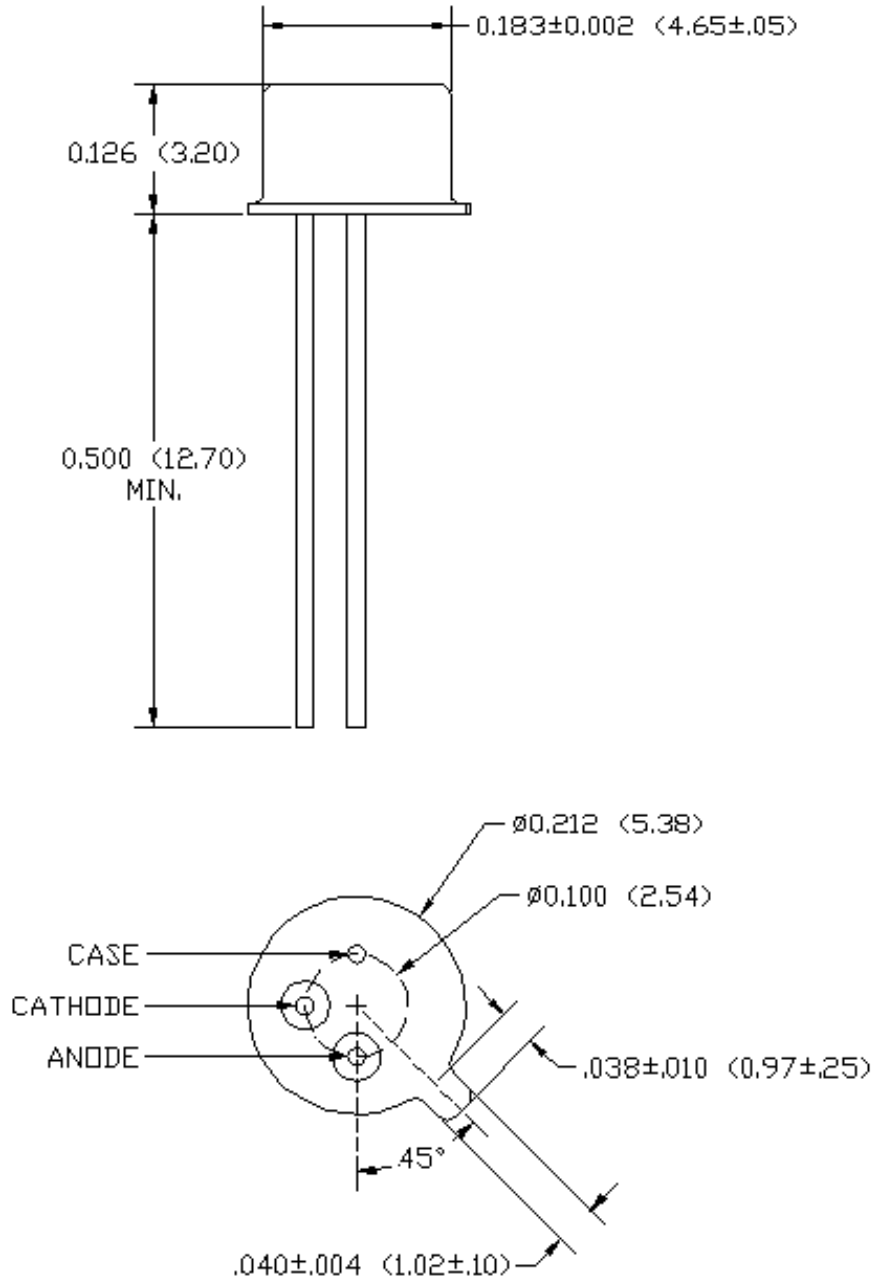
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1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200  
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OPF345 Series



## Mechanical Data



DIMENSIONS ARE IN INCHES (MILLIMETERS)

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## Electrical Specifications

Absolute Maximum Ratings ( $T_A = 25^\circ\text{C}$ unless otherwise noted)	
Storage Temperature Range	-55° C to +150° C
Operating Temperature Range	-40° C to +125° C
Lead Soldering Temperature <sup>(1)</sup>	260° C
Continuous Forward Current <sup>(2)</sup>	100 mA
Maximum Reverse Voltage	1.0 V

Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)							
SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITIONS
$P_{T50}$ <sup>(3)</sup>	Total Coupled Power	OPF345A	20.0	25.0		$\mu\text{W}$	$I_F = 100\text{ mA}$
		OPF345B	15.0	18.0			
	50/125 mm Fiber NA = 0.20	OPF345C	10.0	12.5			
		OPF345D	5.0	7.5			
$V_F$	Forward Voltage		1.8	2.2	V	$I_F = 100\text{ mA}$	
$V_R$	Reverse Voltage		1.8		V	$I_R = 100\ \mu\text{A}$	
$\lambda$	Wavelength		830	850	870	nm	$I_F = 50\text{ mA}$
$\Delta\lambda$	Optical Bandwidth			35		nm	$I_F = 50\text{ mA}$
$t_r, t_f$	Rise and Fall Time			3.5	4.5	ns	$I_F = 100\text{ mA}; 10\% \text{ to } 90\%^{(4)}$

### Notes:

1. Maximum of 5 seconds with soldering iron. Duration can be extended to 10 seconds when flow soldering. RMA flux is recommended.
2. De-rate linearly at 1.0mA /°C above 25°C .
3. The component must be actively aligned into the mating fiber cable assembly to achieve optimal performance.
4. No Pre-bias.
5. All Optek fiber optic LED products are subjected to 100% burn-in as part of its quality control process. The burn-in conditions are 96 hours at 100mA drive current and 25°C ambient temperature.

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### Performance

