



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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Infrared Light Emitting Diode

OP205CL



Features:

- High power GaAIAs
- Narrow beam angle—near parallel beam
- 875 nm wavelength
- TO-46 package
- Wide operating temperature range



Description:

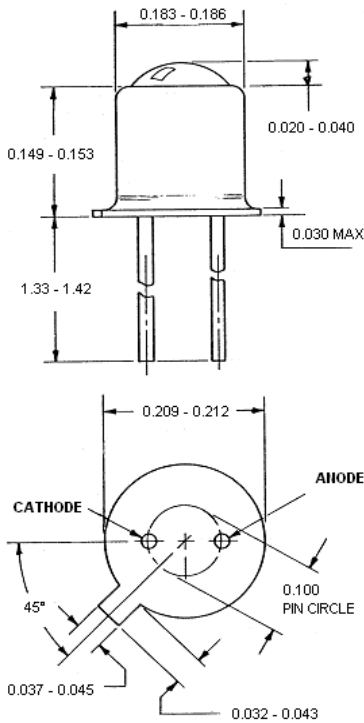
The **OP205CL** is a high efficiency GaAIAs infrared LED mounted in a TO-46 metal can package. The device features a special dome lens that allows a very narrow beam angle. The result is a near parallel beam that is useful in applications that require a collimated light source with a uniform intensity pattern.

OP205CL LED is mechanically and spectrally matched to OP800 series phototransistors.

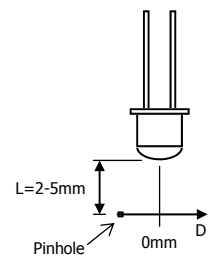
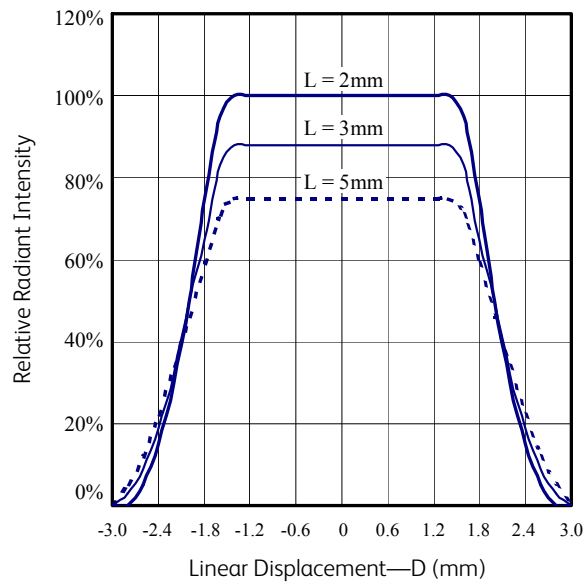
Applications:

- Optical encoders
- Triangulation sensors
- Long distance sensing

Ordering Information			
Part Number	LED Peak Wavelength	Total Beam Angle	Lead Length
OP205CL	875 nm	10°	34mm



Relative Radiant Intensity vs. Linear Displacement



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.

OPTEK Technology, Inc.
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200
www.optekinc.com | www.ttelectronics.com

Infrared Light Emitting Diode

OP205CL



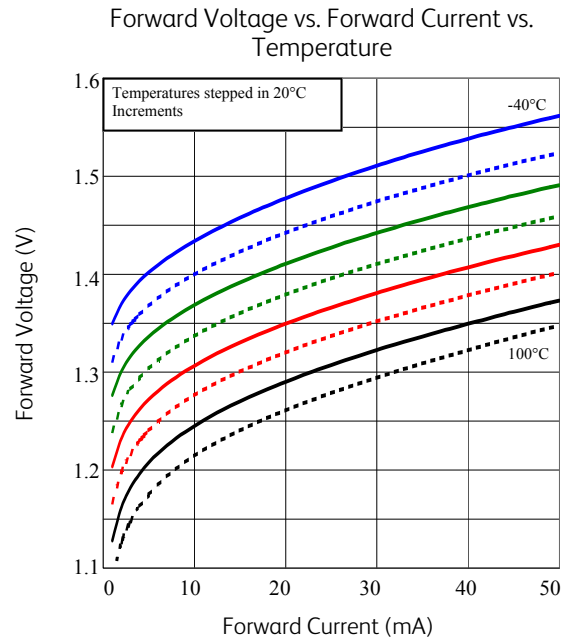
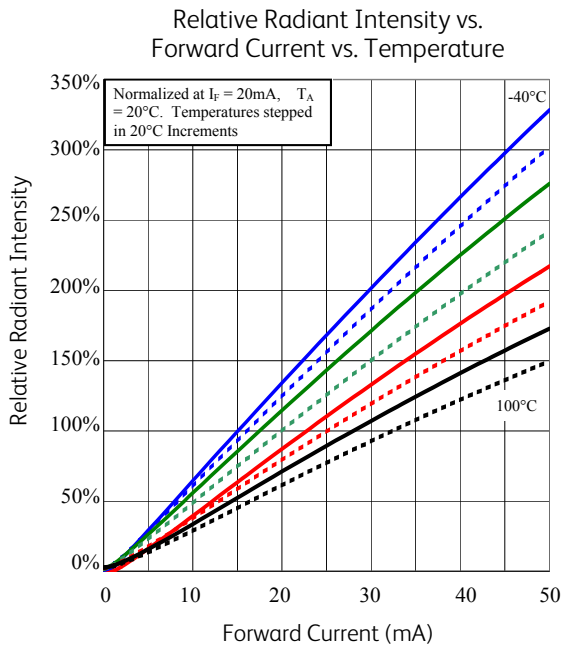
Electrical Specifications

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)	
Storage Temperature Range	-40°C to $+125^\circ\text{C}$
Operating Temperature Range	-40°C to $+100^\circ\text{C}$
Lead Soldering Temperature	$260^\circ\text{C}^{(1)}$
Reverse Voltage	3.0 V
Continuous Forward Current	50 mA
Power Dissipation	160 mW ⁽²⁾

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
P_O	Radiant Intensity	8.5	12.0	-	mW	$I_F = 50\text{mA}^{(3)}$
V_F	Forward Voltage	-	-	2.0	V	$I_F = 50\text{mA}$
I_R	Reverse Current	-	-	10	μA	$V_R = 3.0\text{V}$
λ_p	Peak Emission Wavelength	-	875	-	nm	$I_F = 20\text{mA}$
Θ_{HP}	Total Emission Angle at Half Power Points	-	6	10	Deg.	$I_F = 20\text{mA}$

Notes:

- Solder time less than 5 seconds at temperature extreme.
- De-rate linearly at $2.17\text{ mW}/^\circ\text{C}$ above 25°C .
- Total Optical Power (P_O) is measured by OPTEK Technology equipment.



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