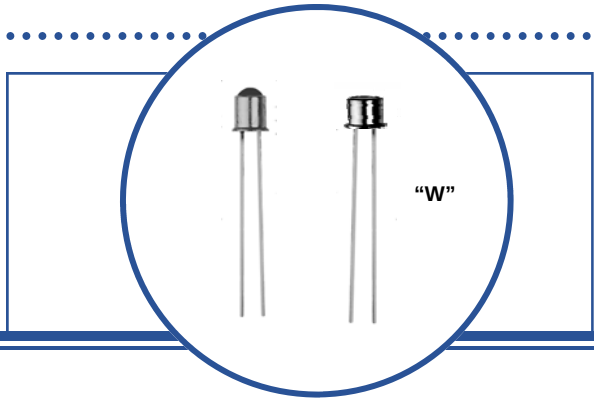
Hermetic Infrared Emitting Diode

OP130 Series

TT electronics
OPTEK Technology

Features:

- TO-46 hermetically sealed package
- Focused and non-focused optical light pattern
- Enhanced temperature range
- Mechanically and spectrally matched to other OPTEK devices
- Choice of power ranges
- Choice of narrow or wide irradiance pattern



Description:

Each **OP130** series device is a 935 nm gallium arsenide (GaAs) infrared LED mounted in a hermetically sealed TO-46 package that provides an enhanced temperature range with a variety of power ranges The TO-46 housing also offers high power dissipation and superior protection for hostile environments.

Each **OP130** device has a narrow beam with an inclusive angle at half power points of 18°. Each **OP130W** series device has a broad irradiance pattern of 50° at half power points, providing relatively even illumination over a large area. *These devices are designed to efficiently operate with OP800, OP593, OP598 and OP599 phototransistors or the OP830 photodarlington.*

Please refer to Application Bulletins 208 and 210 for additional design information and reliability (degradation) data.

Custom electrical, wire and cabling and connectors are available. Contact your local representative or OPTEK for more information.

Applications:

- Non-contact reflective object sensor
- Assembly line automation
- Machine automation
- Machine safety
- End of travel sensor
- Door sensor

Ordering Information

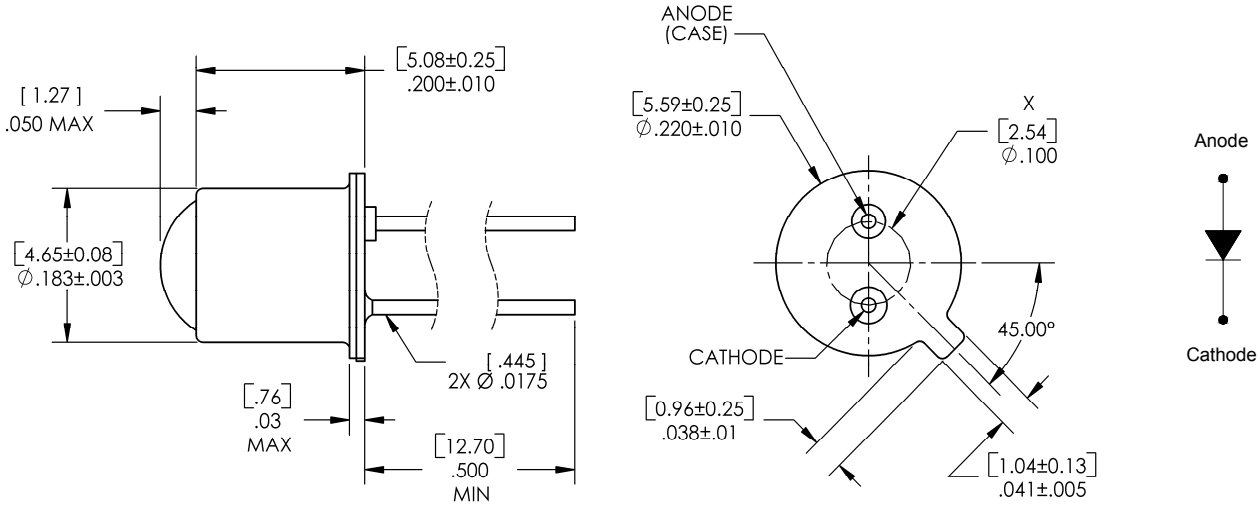
Part Number	LED Peak Wavelength	Output Power (mW/cm^2) Min / Max	Lens Type	Total Beam Angle	Lead Length (Min)
OP130	935 nm	1.0 / NA	Dome	18°	0.50"
OP131		3.0 / NA			
OP132		4.0 / NA			
OP133		5.0 / NA			
OP130W		1.0 / NA	Flat	50°	
OP131W		3.0 / NA			
OP132W		4.0 / NA			
OP133W		5.0 / NA			

Pb
RoHS

OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

OPTEK Technology Inc. — 1645 Wallace Drive, Carrollton, Texas 75006
Phone: (972) 323-2200 or (800) 341-4747 FAX: (972) 323-2396 sensors@optekinc.com www.optekinc.com

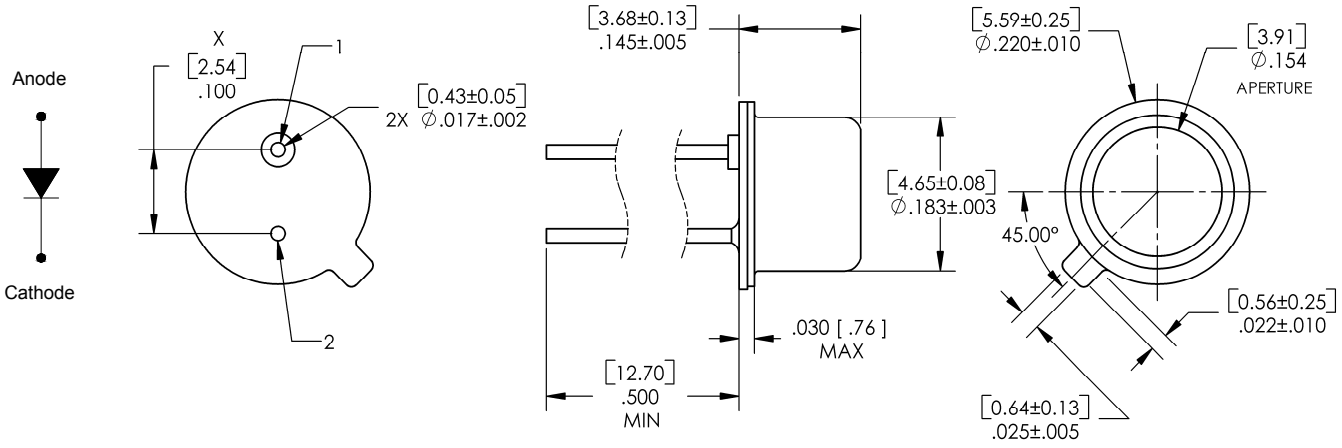
OP130, OP131, OP132, OP133



X THIS DIMENSION CONTROLLED AT HOUSING SURFACE.

DIMENSIONS ARE IN: **[MILLIMETERS]**
INCHES

OP130W, OP131W, OP132W, OP133W



X THIS DIMENSION CONTROLLED AT HOUSING SURFACE.

DIMENSIONS ARE IN: **[MILLIMETERS]**
INCHES

Pin #	LED
1	Anode
2	Cathode

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Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Storage Temperature Range	-65° C to +150° C
Operating Temperature Range	-65° C to +125° C
Reverse Voltage	2.0 A
Continuous Forward Current	100 mA
Peak Forward Current	10.0 A
Lead Soldering Temperature [1/16 inch (1.6 mm) from case for 5 seconds with soldering iron]	260° C(1)(2)
Power Dissipation	200 mW(3)

Electrical Characteristics (T_A = 25°C unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Input Diode						
P_O	Radiant Power Output OP130, OP130W OP131, OP131W OP132, OP132W OP133, OP133W	 1.0 3.0 4.0 5.0	 - - - -	 - - - -	mW	I_F = 100 mA(3)
V_F	Forward Voltage	-	-	1.75	V	I_F = 100 mA (3)
I_R	Reverse Current	-	-	100	µA	V_R= 2.0 V
λ_P	Wavelength at Peak Emission	-	935	-	nm	I_F = 10 mA
β	Spectral Bandwidth between Half Power Points	-	50	-	nm	I_F = 10 mA

Notes:
1. RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering.
2. Derate linearly 2.0 mW/° C above 25° C.
3. Measurement made with 100 µs pulse measured at the trailing edge of the pulse with a duty cycle of 0.1% and an I_F = 100 mA.

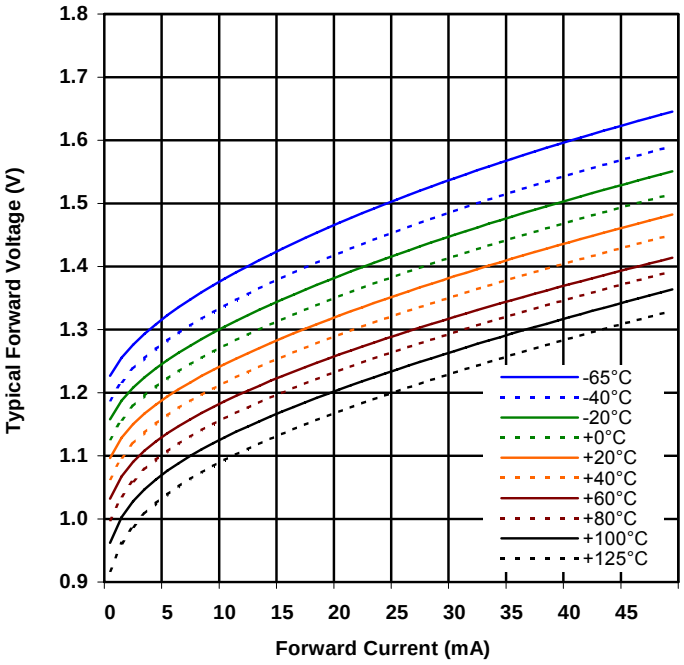
Electrical Characteristics (T_A = 25°C unless otherwise noted — for reference only)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Input Diode						
$\Delta\lambda_P/\Delta T$	Spectral Shift with Temperature	-	+0.30	-	nm/°C	I_F = Constant
θ_{HP}	Emission Angle at Half Power Points OP130 series OP130W series	 - -	 18 50	 - -	Degree	I F = 100 mA
t_r	Output Rise Time	-	1000	-	ns	$I_{F(PK)}$=100 mA, PW=10 µs, and D.C.=10.0%
t_f	Output Fall Time	-	500	-	ns	

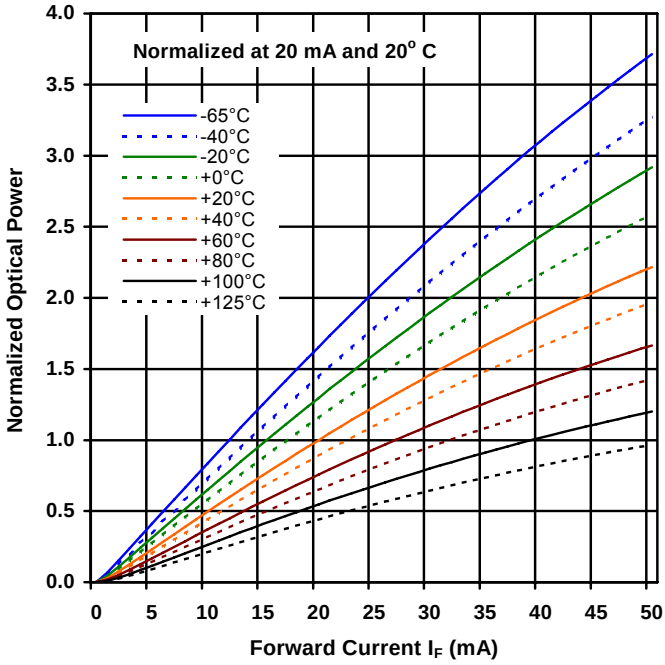
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OP130 Series (including “W” devices)

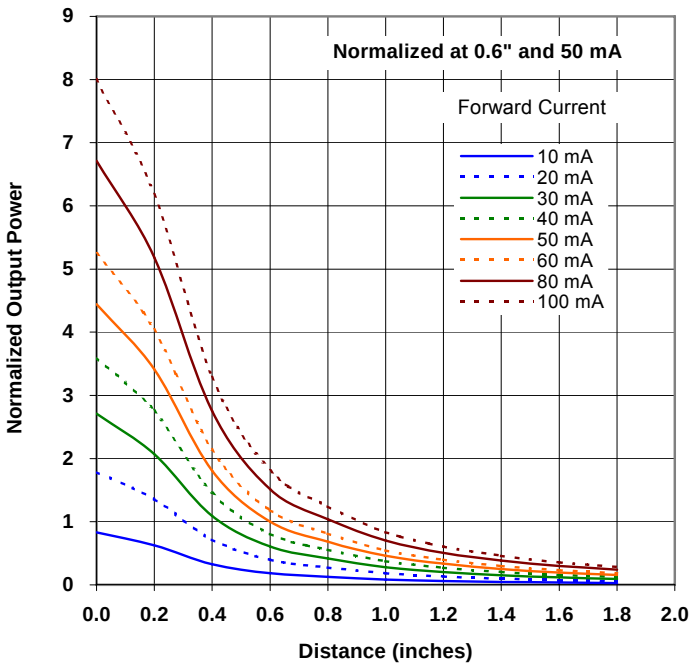
Forward Voltage vs Forward Current vs Temperature



Optical Power vs I_F vs Temp



Distance vs Output Power vs Forward Current



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LifeElectronics
Живое партнерство

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ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

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- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
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- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
- *Формирование склада под заказчика.*

- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

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- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
- *Оценку стоимости проекта по компонентам.*
- *Изготовление тестовой платы монтаж и пусконаладочные работы.*

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