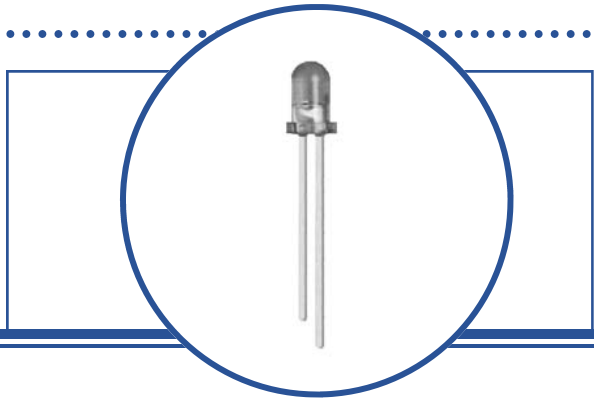
Plastic Infrared Emitting Diode

OP265FAA Series

TT electronics
OPTEK Technology

Features:

- T-1 (3 mm) package style
- Narrow irradiance pattern
- Dome lens
- Higher power output than GaAs at equivalent drive currents
- 850 nm diode



Description:

Each device in the **OP265FAA** series is a high intensity gallium arsenide infrared emitting diode (GaAlAs) that is molded in an IR transmissive clear epoxy package with a dome lens. Devices feature a narrow source irradiance pattern and a variety of electrical characteristics. The small T-1 package style makes these devices ideal for space-limited applications.

These devices are mechanically and spectrally matched to other OPTEK products as follows:

OP265 devices conform to the OP505 and OP535 series devices.

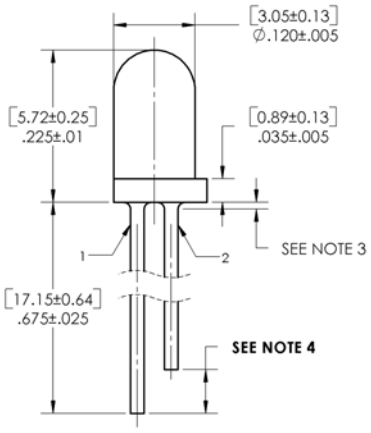
Please refer to Application Bulletins 208 and 210 for additional design information and reliability (degradation) data.

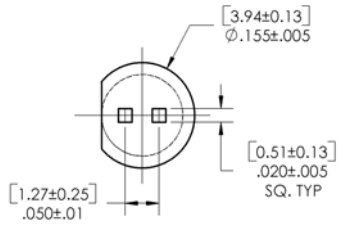
Applications:

- Space-limited applications
- Applications requiring coupling efficiency
- Battery-operated or voltage-limited applications

Ordering Information					
Part Number	LED Peak Wavelength	Output Power (mW/cm^2) Min / Max	I_F (mA) Typ / Max	Total Beam Angle	Lead Length
OP265FAA	850 nm	5.5 / NA	20 / 50	18°	0.50”
OP265FAB		7.5 / 12.5			
OP265FAC		11.5 / 16.5			
OP265FAD		15.5 / NA			

DIMENSIONS ARE IN: [MILLIMETERS] INCHES





DISCRETE PIN-OUT

1 CATHODE

2 ANODE

IMPORTANT:
For identification purposes, ANODE lead is shorter that the CATHODE lead in order to differentiate this product from regular OP265 and/or OP313.

Pin #	LED
1	Cathode
2	Anode

NOTES:

1. OUTSIDE DISCRETE SHELL IS POLYSULFONE P1700 CLEAR.
2. THIS LED IS BUILT WITH A 850nm CHIP.
3. MAX ALLOWABLE EPOXY MINISCUS IS 0.030.
4. FOR IDENTIFICATION PURPOSES, ANODE LEAD IS .065 ± .035 **SHORTER** THAN THE CATHODE LEAD.

CONTAINS POLYSULFONE

To avoid stress cracking, we suggest using ND Industries' **Vibra-Tite** for thread-locking. **Vibra-Tite** evaporates fast without causing structural failure in OPTEK'S molded plastics.

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

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

Storage and Operating Temperature Range	-40° C to +100° C
Reverse Voltage	2.0 V
Continuous Forward Current	50 mA
Peak Forward Current (1 µs pulse width, 300 pps)	3.0 A
Lead Soldering Temperature [1/16 inch (1.6 mm) from case for 5 seconds with soldering iron]	260° C(1)
Power Dissipation	100 mW(2)

Notes:
1. RMA flux is recommended. Duration can be extended to 10 second maximum when flow soldering. A maximum of 20 grams force may be applied to the leads when soldering.
2. Derate linearly at 1.33 mW/° C above 25° C.
3. $E_{E(APT)}$ is a measurement of the average apertured radiant incidence upon a sensing area 0.081" (2.06 mm) in diameter, perpendicular to and centered on the mechanical axis of the lens and 0.590" (14.99 mm) from the measurement surface. $E_{E(APT)}$ is not necessarily uniform within the measured area.

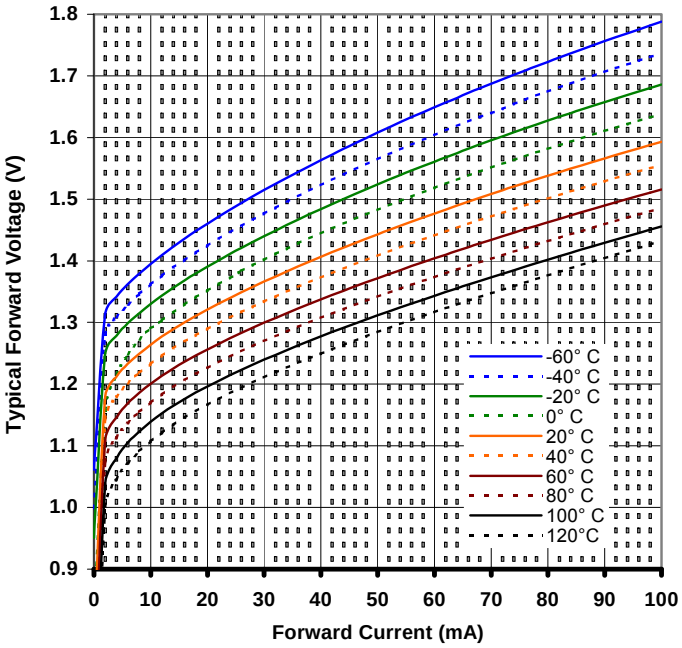
Electrical Characteristics (T_A = 25°C unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Input Diode						
$E_{E\ (APT)}$	Apertured Radiant Incidence OP265FAA OP265FAB OP265FAC OP265FAD	 5.50 7.50 11.50 15.50	 - - - -	 - 12.5 16.5 -	mW/cm^2	I_F = 20 mA Aperture = 0.081" diameter Distance = 0.590" from seating surface to aperture surface
V_F	Forward Voltage	-	-	1.80	V	I_F = 20 mA
I_R	Reverse Current	-	10	-	µA	V_R= 10 V
λ_P	Wavelength at Peak Emission	-	850	-	nm	I_F = 10 mA
$\Delta\lambda_P/\Delta T$	Spectral Shift with Temperature	-	±0.18	-	nm/°C	I_F = Constant
θ_{HP}	Emission Angle at Half Power Points	-	18	-	Degree	I_F = 20 mA
t_r	Output Rise Time	-	10	-	ns	$I_{F(PK)}$=100 mA, PW=10 µs, D.C.=10.0%
t_f	Output Fall Time	-	10	-	ns	

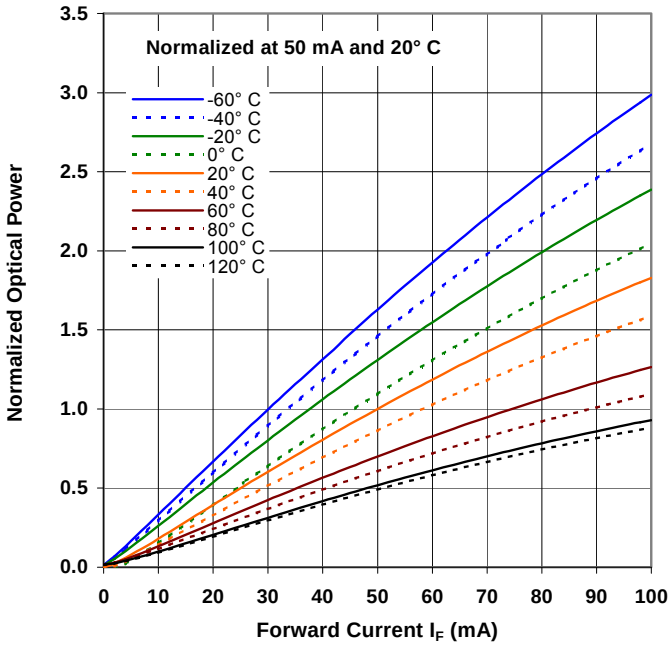
OPTEK Technology Inc. — 1645 Wallace Drive, Carrollton, Texas 75006
Phone: (972) 323-2200 or (800) 341-4747 FAX: (972) 323-2396 sensors@optekinc.com www.optekinc.com

OP265F (AA, AB, AC, AD)

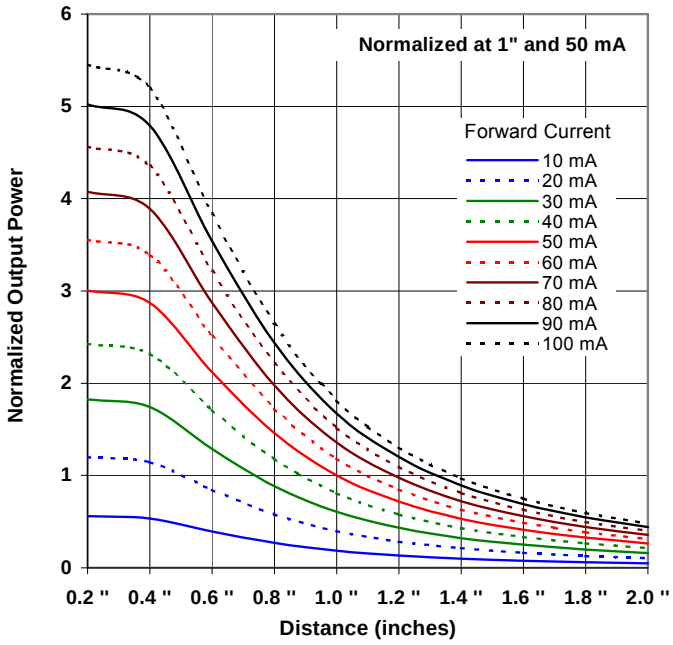
Forward Voltage vs Forward Current vs Temperature



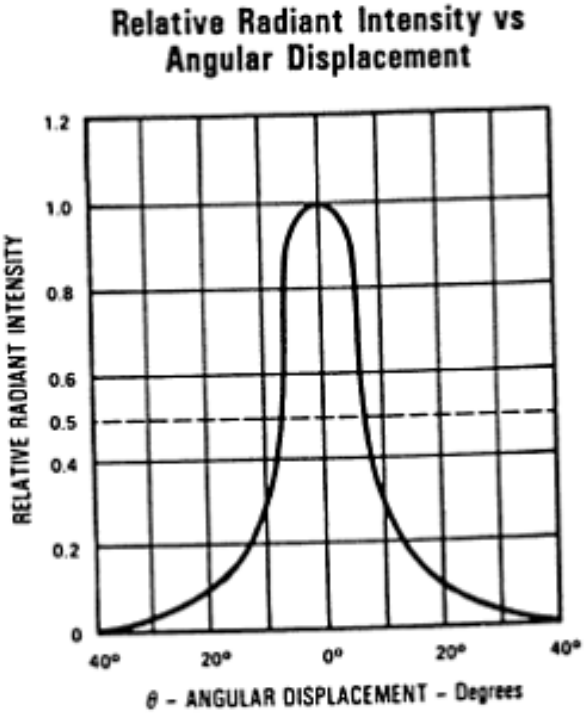
Optical Power vs I_F vs Temperature



Distance vs Output Power vs Forward Current



Relative Radiant Intensity vs Angular Displacement



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Infrared Emitters ***category:***

Click to view products by TT Electronics ***manufacturer:***

Other Similar products are found below :

LTE-309 LTE-3279K LTE-4206C LTE-4208C EAILP03RDAA6 LTE-2871C LTE-4238 ASDL-4264-C22 OED-EL305F4C50-HT OP216-004 LTE-3376 EEL109 HL-PST-1608IR1C-L4 SFH 7016 IN-S126ETIR IN-S126DSHIR IN-S126ETHIR IN-P32ZTHIR IN-S42CTQHIR IN-S126BTHIR IN-S63DTHIR IN-S85BTHIR IN-S63FTHIR EAIST3535A1 EAIST3535A4 MHT153IRCT MHS153IRCT HIR204C/H0 HIR323C LTE-209 IR12-21C/TR8 IR17-21C/TR8 IR26-21C/L110/TR8 IR91-21C/TR10 KM-4457F3C L-53F3BT WP3A10F3C LTE-4208 OP235W IR42-21C/TR8 HSDL-4261 APA3010F3C-GX SE2460-140 OP266-905 OP280D LTE-2871 HIR8323/C16 KP-2012SF4C KPA-3010F3C L-7113SF6C