

Emitters & Detectors

Surface Mount -SMT-TOPLED



Surface mount infra-red emitter diode order code 264-910 in standard TANTAL/B outline package. Flat top and sides to device gives pick and place compatibility. Applications as miniature light barriers, in measurement and control, industrial electronics. Supplied on tape in multiples of 10 (reel = 1500pcs).



A Gallium Aluminum Arsenide (880nm) infrared emitter combined with a phototransistor in an industry standard PLCC2 size package. The device has independent connections to the emitter anode and cathode and the phototransistor order code 249-397 collector and emitter. It is ideal for short range simplex data transmission at data rates up to 70Kbit/sec. Operating temperature is -55° to +100°C.

OPT237

10 Per Strip	Mfrs. List No.	Order Code	1+	10+	25+	50+
Emitter	SFH421-P	264-910				
			Price Each			
			1+	25+	100+	250+
Emitter/Detector	SFH7221	249-397				

Surface Mount - Radial Emitters and Detectors



- Both emitters and detectors have side looking packages
- Both are true surface mountable packages with lens
- Flat top for easy vacuum pick up
- Flat bottom for good PCB adhesion
- High speed photodiode or high sensitivity phototransistor with SFH2500FA and SFH3500FA have daylight filters

- Emission half angle $\pm 14^\circ$, detection half angle $\pm 13^\circ$
- Emitters are high Power GaAlAs (SFH4580, 880nm) or low cost GaAs (SFH4510, 950nm)
- Emitters matched to SFH3500 phototransistors or SFH2500 photodiode

OPT587

Order Multiple=5	Mfrs. List No.	Order Code	5+	25+	100+	250+	500+
Emitters							
	SFH4510	248-873					
	SFH4580	248-885					
Detectors							
	SFH2500	248-897					
	SFH2500FA	249-488					
	SFH3500	248-903					
	SFH3500FA	249-490					

High Speed, High Power Emitters



Light Output mW/sr @ I _f = 100mA	Half Angle	Peak Wavelength	Switching tr,tf (ns)	Mfrs. List No.	Order Code
TOPLED					
7	60°	880nm	10	SFH4290	249-427
SIDELED					
7	60°	880nm	10	SFH4295	249-439

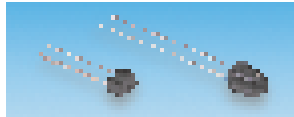
OPT588

Mfrs. List No.	Order Code	5+	25+	100+	250+	500+
SFH4290	249-427					
SFH4295	249-439					

Infra-Red Emitters – Plastic Package

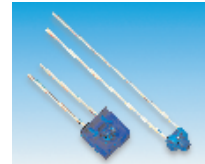


5mm/T1¼	5mm/T1¼	3mm/T1	Side Viewing
Lead pitch = 2.54 Flat: Cathode (SFH486 = Flat: Anode)	SFH485P-1: Flat top H = 5.0, Lead pitch = 2.54 Flat: Cathode	TSIP4400: Lead pitch = 2.54 Short lead: Cathode Others: Lead pitch = 1.27 Flat: Cathode	SEP8506-3: 5.7 4.5 2.3 Lead pitch = 2.54



Side viewing SEP8736-3
3.3 4.57 4.29
Lead pitch = 2.54

TO-18
Lead pitch 2.54
tab: cathode



Side Viewing COX48B
5.0 5.0 2.65
Lead pitch = 2.54

1.8mm/T¾
CQY37N
L = 2.9, Lead pitch = 2.54
Flat: Cathode

Light Output mW @ I _f (mA)	Half Angle	Peak Wavelength, λ _p (nm)	Switching t _r (μs)	Mfr.	Mfrs. List No.
5mm/T1¼					
38W/sr @ 100	30°	875nm	0.4	Agilent	HSDL-4220
15mW/sr @ 100	50°	950nm	1.0	Infineon	LD271
>40mW/sr @ 100	34°	950nm	0.5	Infineon	SFH415-U
80 – 160mW/sr @ 100	16°	880nm	0.6, 0.5	Infineon	SFH484-2
3.15 – 6.3mW/sr @ 100	80°	880nm	0.6, 0.5	Infineon	SFH485P-1
60 @ 100	22°	880nm	0.6, 0.5	Infineon	SFH486
30-50mW/sr @ 100	12°	875nm	0.6	VISH	TSHA5201
25-40mW/sr @ 100	12°	875nm	0.6	VISH	TSHA5200
15 @ 100	35°	950nm	0.4, 0.45	VISH	TSUS5202
11 @ 100	50°	950nm	0.4, 0.45	VISH	TSUS5400

For matching detectors see 327-438 (for 178-302), 178-546 (for 178-544), 212-751 (for 212-635 and 212-672), 212-738 (for 212-684).

3mm/T1	Half Angle	Peak Wavelength, λ _p (nm)	Switching t _r (μs)	Mfr.	Mfrs. List No.
16-30mW/sr @ 100	20°	875nm	0.6	VISH	TSHA4401
7-18mW/sr @ 100	16°	950nm	0.8	VISH	TSUS4300
16-30mW/sr @ 100	25°	940nm	0.8	VISH	TSAL4400
0.5 @ 20	16°	940nm	0.6, 0.35	Optek	OP165D
2.0 – 4.0mW/cm² @ 100	15°	935nm	0.6	HWL	SEP8505-3
3.0 @ 20	45°	880nm	1.5	III-V	TEMT1288C

For matching detectors see 178-946 (for 178-945), 327-517 (for 327-293), 178-547 (for 178-545), 657-694 (for 657-610)

1.8mm/T¾	Half Angle	Peak Wavelength, λ _p (nm)	Switching t _r (μs)	Mfr.	Mfrs. List No.
2.2-5mW/sr @ 50	12°	950nm	0.4, 0.45	VISH	CQY37N

For matching detector see 657-657 (for 657-633)

TO-18 Narrow angle	Half Angle	Peak Wavelength, λ _p (nm)	Switching t _r (μs)	Mfr.	Mfrs. List No.
4.8mW @ 100	25°	890nm	0.5, 0.25	Optek	OP298B

TO-18 Wide angle	Half Angle	Peak Wavelength, λ _p (nm)	Switching t _r (μs)	Mfr.	Mfrs. List No.
26mW @ 100	60°	890nm	0.5, 0.25	Optek	OP293B

For matching detectors see 491-329 (for 491-305) and 491-317 (for 491-299)

Side Viewing	Half Angle	Peak Wavelength, λ _p (nm)	Switching t _r (μs)	Mfr.	Mfrs. List No.
0.40 – 1.20mW/cm²	40°	890nm	0.5, 0.25	Optek	OP240B
0.45 – 0.9mW/cm² @ 100	50°	935nm	0.6	HWL	SEP8506-3
1.7mW (min) @ 20	10°	880nm	0.7	HWL	SEP8736-3
2-4mW/sr @ 50	25°	950nm	0.4, 0.45	VISH	COX48B

For matching detectors see 327-530 (for 327-311) and 491-408 (for 491-391), 657-682 (for 657-621), 316-7525 (for 316-7537)

OPT143

Order Multiple=5	Mfrs. List No.	5+	25+	100+	500+	1K+
5mm/T1¼	Order Code					
	HSDL-4220					
	LD271					
	SFH415-U					
	SFH484-2					
	SFH485P-1					
	SFH486					
	TSHA5201					
	TSHA5200					
	TSUS5202					
	TSUS5400					
Order Multiple=1						
3mm/T1		1+	25+	100+	500+	1K+
	TSHA4401					
	TSUS4300					
	TSAL4400					
	OP165D					
	SEP8505-3					
	TEMT1288C					
Order Multiple=5		5+	25+	100+	500+	1K+
1.8mm/T¾						
	CQY37N					
Order Multiple=1		1+	25+	10+	500+	1K+
TO-18 Narrow angle						
	OP298B					
TO-18 Wide angle						
	OP293B					
Order Multiple=5		5+	25+	100+	500+	1K+
Side Viewing						
	OP240B					
Order Multiple=1		1+	25+	100+	500+	1K+
	SEP8506-3					
	SEP8736-3					
Order Multiple=5		5+	25+	100+	500+	1K+
	COX48B					

† Available until stocks are exhausted