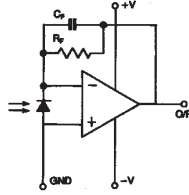
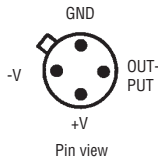
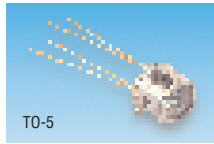


Photodiode with Integral Amplifier

IPL



Hybrid photodetector consisting of photodiode and amplifier with feedback circuit providing an output voltage proportional to the incident light level (increasing with increasing light level). Operates from single or dual supply.

dc supply voltage	+4V to +36V or ±2V to ±18V	Peak spectral response	900nm
Active area	1.75mm ²	Frequency response (-3dB)	65kHz
Output Voltage at Peak Responsivity	Half Angle	Mfrs. List No.	
Flat	860mV/μW/cm ²	86°	IPL10530DAW
Domed	860mV/μW/cm ²	27°	IPL10530DAL

OPT173

Mfrs. List No.	Order Code	Price Each				
		1+	10+	25+	100+	250+
IPL10530DAW	.327-487					
IPL10530DAL	.232-646					

Hybrid Emitters and Detector

IPL



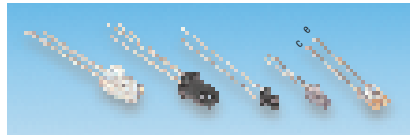
The emitter units include a monitoring photodiode and amplifier, the output of which can be used to servo the emitter for constant output. Alternatively, an emitter can be used in conjunction with the detector unit, which is a photodiode and amplifier matched to the emitter. The two outputs can then be fed into a difference amplifier for various differential monitoring applications including smoke monitors and meters, particle monitoring and various water analysers.

Emitter Units		Detector Units	
dc supply voltage	±2V to ±18V	dc supply voltage	±2V to ±18V
Wavelength (pk)	Green: 565nm IR: 880nm	dc supply voltage	+14V to +36V
LED beam angle (-3dB)	10°	Peak spectral response	900nm
Detector freq. response (-3dB)	35kHz	Frequency response (-3dB)	35kHz
		Half angle	27°

OPT233

	Order Code	Price Each		
		1+	10+	25+
Emitter, Green	.265-536			
Emitter, IR	.265-548			
Detector	.265-550			

Phototransistor Detectors – Plastic Package



3mm/T1 BPW85B, SFH309-FA-4: Lead pitch = 2.54 Short lead: Collector	Others: Lead pitch = 1.3 Flat: Collector	5mm/T1¾ SFH300-3: 2 lead, Flat: Cathode BPV11F: 3 lead, pins on 2.54 PCD	Side Viewing SDP8406-3 5.7 4.5 2.3 Lead pitch = 2.54
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Side Viewing SDP8436-3
3.3 4.57 4.29
Lead pitch = 2.54



1.8mm/T¾
BPW17N
L = 2.9, Lead pitch = 2.54
Flat: Collector

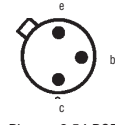
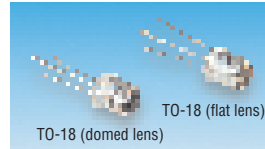
Sensitivity (mA)	Half Angle	Peak Response	Response t _r , t _f (μs)	Mfrs.	Mfrs. List No.
5mm/T1¾					
4.0-8.0 @ 0.5mW/cm ²	20°	850nm	10	Infineon	SFH313-2
1.0-2.0 @ 0.5mW/cm ²	80°	850nm	10	Infineon	SFH314-2
4.0 - 8.0 @ 0.5mW/cm ²	50°	850nm	10	Infineon	SFH300-3
9.0 (typ) @ 1mW/cm ²	30°	900nm	3.3	VISH	◆ BPV11F
3.0-10.0 @ 1mW/cm ²	15°	950nm	3.8	VISH	BPV11
3mm/T1					
1.0 - 2.0 @ 0.5mW/cm ²	32°	900nm	10	Infineon	◆ SFH309-FA4
1.5 - 4.0 @ 1mW/cm ²	50°	830nm	1.5	VISH	BPW85B
3.0-8.0 @ 1mW/cm ²	25°	950nm	1.5	VISH	BPW85C
0.8-3.2 @ 1mW/cm ²	30°	950nm	1.5	VISH	TEFT4300
4.0 (min) @ 20mW/cm ²	16°	840nm	5	Optek	OP505D
12.0 - 24.0 @ 5mW/cm ²	40°	880nm	12	HWL	SDP8405-3
1.8mm/T¾					
0.5-1.0 @ 1mW/cm ²	12°	950nm	3.7	VISH	BPW17N
Side Viewing					
3.4 - 6.5 @ 1mW/cm ²	50°	935nm	8	HWL	SDP8406-3
7.0 - 17.5 @ 1mW/cm ²	18°	880nm	10	HWL	SDP8436-3
2.0-4.0 @ 1mW/cm ²	25°	950nm	3.8	VISH	BPW78B

◆ with IR filter (filters out daylight)

OPT140

Mfrs. List No.	Order Code	Price Each				
		1+	25+	100+	500+	1K+
5mm/T1¾						
SFH313-2	.881-934					
SFH314-2	.881-946					
SFH300-3	.212-763					
BPV11F	.178-546					
BPV11	.657-670					
3mm/T1						
SFH309FA-4	.212-775					
BPW85B	.178-547					
BPW85C	.657-669					
TEFT4300	.657-694					
OP505D	.178-946					
SDP8405-3	.327-505					
1.8mm/T¾						
BPW17N	.657-657					
Side Viewing						
SDP8406-3	.327-530					
SDP8436-3	.491-408					
BPW78B	.657-682					

Phototransistor Detectors – Sealed Metal Package



Sensitivity IC	Half Angle	Peak Response	Response t _r , t _f (μs)	Mfrs.	Mfrs. List No.
Narrow Angle (Domed Lens)					
3mA @ 0.2mW/cm ²	15°	850nm	75, 50	QT	◆ L14F1
6mA @ 10mW/cm ²	15°	850nm	5	QT	L14G1
12mA @ 10mW/cm ²	15°	850nm	5	QT	L14G3
7 - 22mA @ 5mW/cm ²	15°	850nm	7	Optek	OP804SL
8mA @ 5mW/cm ²	18°	880nm	6	HWL	SD5443-3
Wide Angle (Flat Lens)					
1.0mA @ 10mW/cm ²	58°	840nm	5	QT	L14C1

◆ Photo Darlington

OPT139

Mfrs. List No.	Order Code	Price Each			
		1+	25+	100+	1K+
L14F1	.327-542				
L14G1	.327-554				
L14G3	.327-566				
OP804SL	.316-7513				
SD5443-3	.327-578				
L14C1	.548-390				

Photologic Plastic Detector

OPTK



OP551 is mechanically and spectrally matched to OP240B, order code 316-7537

Side Viewing 5.71 4.44 2.35

Irradiance @ 935nm	Positive Going Threshold Irradiance	V _{cc}	t _r , t _f (typ.)	V _{OH} (V) min. typ.	V _{OL} (V) typ. max.	Mfrs. List No.
10mW/cm ²	0.25 - 2.4W/cm ²	4.5-5.5	25ns	2.4, 3.3	0.25, 0.40	OPL551

OPT662

Mfrs. List No.	Order Code	Price Each			
		1+	25+	100+	250+
OPL551	.316-7525				

continued