

Emitters and Detectors - continued

Phototransistor Detectors - - continued

Plastic Package - continued

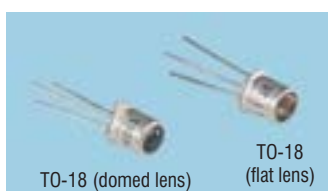
Sensitivity					
Side Viewing					
3.4-6.5 @ 1mW/cm ²	50°	935nm	8 HWL	SDP8406-3	
7.0-17.5 @ 1mW/cm ²	18°	880nm	10 HWL	SDP8436-3	
2.0-4.0 @ 1mW/cm ²	37°	920nm	6 VISH	TEKT5400-ASZ	
◆ with IR filter (filters out daylight)					

206219

Mfrs. List No.	Order Code	1+	25+	100+	250+	+
5mm/T1¼						
BPV11F	104-5379	76.00	68.00	57.00	46.00	--
BPV11	104-5525	76.00	68.00	57.00	46.00	--
3mm/T1						
SFH309FA-4	121-2744	42.00	37.00	31.00	24.00	--
OP505D	178-946	92.00	79.00	68.00	36.00	--
SDP84053	120-1205	66.00	63.00	59.00	54.00	--
BPW85	104-5380	48.00	43.00	36.00	29.00	--
BPW85C	104-5524	51.00	46.00	38.00	31.00	--
TEFT4300	104-5526	48.00	43.00	36.00	29.00	--
1.8mm/T¼						
BPW17N	104-5523	61.00	55.00	46.00	37.00	--
Side Viewing						
SDP8406-3	120-1206	53.00	50.00	48.00	45.00	--
SDP8436-3	120-1210	76.00	71.00	67.00	65.00	--
TEKT5400-ASZ	104-5447	40.00	36.00	30.00	24.00	--

Phototransistor Detectors -

Sealed Metal Package



Pins on 2.54 PCD

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

206218

Mfrs. List No.	Order Code	1+	25+	100+	1K+
OP804SL	316-7513	226.00	202.00	184.00	118.00
SD5443-3	327-578	128.00	121.00	115.00	109.00
L14F1	102-1141	99.00	78.00	61.00	56.00
L14G1	102-1142	93.00	73.00	54.00	46.00
L14G3	102-1143	94.00	75.00	55.00	48.00
L14C1	102-1348	96.00	76.00	56.00	51.00

Ambient Light Photo Diode

Miniature Surface Mount



H = 0.6, W = 2.0, D = 1.5mm

- Close responsivity to the human eye
- Miniature QFN surface mount package
- Infinite ambient detection threshold control
- Guaranteed temperature performance
- V_{CC} supply 2.7 to 3.6V

The HSDL-9001 is an analogue-output ambient light photo diode in a miniature Quad-Flat surface mount package. The device may be used in applications where ambient light is required or in applications that use daylight and artificial light exposed devices. The device has a spectral response that peaks at the same wavelength as the human eye, 550nm, which ensures that the sensor provides a high performance solution to ambient light detection. Mobile phones and PDAs that draw heavy current from display backlighting benefit from incorporating the device in their designs to significantly reduce the power consumption.



Recommended operating conditions	Min.	Max.
Operating Temperature (°C)	-40	85
Supply Voltage (V)	2.7	3.6
Light Current (nA)	125 (Typ.)	
Dark Current (nA)		5
Peak Wavelength Sensitivity (nm)	550 (Typ.)	
Switching Time (ms)		2

417935

Mfrs. List No.	Order Code	1+	10+	25+	100+
HSDL-9001	961-3820	37.00	33.00	30.00	28.00

Ambient Light Photo Sensor

Miniature Surface Mount



H = 0.8, W = 2, D = 1.25mm

The APDS-9002 is an analogue-output ambient light photo sensor in a miniature chipLED surface mount package. It consists of a spectrally suited phototransistor, which peaks in the human luminosity curve. Hence, it provides an excellent responsivity that is close to the response of human eye.

The APDS-9002 is ideal for applications in which the measurement of ambient light is used to control display backlighting. Mobile appliances such as mobile phones and PDAs that draw heavy current from display backlighting will benefit from incorporating this photo sensor in the design by reducing power consumption significantly.

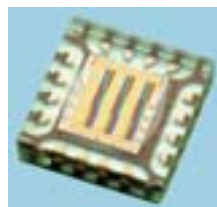
Recommended operating conditions	Min.	Max.
Operating Temperature (°C)	-40	85
Supply Voltage (V)	2.4	5.5
Photo Current (μA) - V _{CC} =3V, Lux=10	10	33
Photo Current (μA) - V _{CC} =3V, Lux=100	136	410
Dark Current (nA)	50 (Typ.)	160
Rise time (ms)	0.95 (Typ.)	2
Fall time (ms)	0.95 (Typ.)	2

417937

Mfrs. List No.	Order Code	1+	10+	25+	100+
APDS-9002-021	961-3854	31.00	28.00	26.00	24.00

Colour Sensor

Light to Voltage Converter



H = 1.0, W = 5, D = 5mm

The sensor is ideal open-loop colour identification and closed-loop colour point control. It is designed for low luminance applications including colour detection, environment lighting, industrial process etc.

Recommended operating conditions	Min.	Max.
Supply Voltage (V)	4.5	5.5
Output Voltage Swing (V)		4.8
Supply Current (mA)	2.5 (Typ.)	
Dark Voltage (mV)		15
Rise time (ms)	5 (Typ.)	
Fall time (ms)	5 (Typ.)	
Operating Temperature (°C)	-40	85

418550

Mfrs. List No.	Order Code	5+	25+	100+	250+	+
HDJD-S722-QR999	105-8376	1,194.00	928.00	760.00	684.00	--

Colour Sense Module

Internal Voltage Regulator



H = 3, W = 27.6, D = 7mm

