

IR Emitter

Absolute Maximum Ratings at $T_A = 25^\circ\text{C}$, $\lambda = 940\text{nm}$

Fig.	Forward Voltage (V@mA)	If (mA)	Radiant Intensity mW/sr	Beam Angle	Peak Length (nm)	Digi-Key Part No.	Price Each			Avago Part No.
							1	10	100	
1	1.15@20	100	4@20mA	50°	940	516-1260-ND	1.52	1.30	1.11	HEMT-3301

Surface Mount Proximity Sensor

Fig.	Forward Voltage	If (Maximum)	Supply Voltage (Maximum)	Photo Current (Typical)	Dark Current (Maximum)	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel Pricing	Avago Part No.
							1	10	100		2,500	
2	1.5V	50mA	1.3V	.1mA	10nA	516-1555-1-ND	2.74	2.41	2.05	516-1555-2-ND	1168.00/M	HSDL-9100-021

Ambient Light Sensors

Fig.	Supply Voltage Range	Light Current Ratio (Typical)	Rise Time (ms)	Fall Time (ms)	Peak Wavelength Sensitivity (nm)	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel Pricing	Avago Part No.
							1	10	100		2,500	
3	2.4 - 5.5	1.2	0.95	0.8	620	516-1714-1-ND	1.04	.89	.76	516-1714-2-ND	455.00/M	APDS-9002-021
4	2.4 - 5.5	1.2	0.95	0.8	620	516-1715-1-ND	1.20	1.02	.87	516-1715-2-ND	525.00/M	APDS-9003-020
5	2.4 - 5.5	1.2	0.95	0.8	620	516-1716-1-ND	1.24	1.06	.90	516-1716-2-ND	542.50/M	APDS-9004-020
6	1.8 - 5.5	1.1	5	5	500	516-1717-1-ND	1.28	1.09	.93	516-1717-2-ND	560.00/M	APDS-9005-020
7	2.4 - 5.5	1.1	5	5	500	516-1718-1-ND	1.44	1.23	1.05	516-1718-2-ND	630.00/M	APDS-9006-020
8	2 - 3.6	1.2	0.2	0.2	560	516-1719-1-ND	1.00	.85	.73	516-1719-2-ND	437.50/M	APDS-9007-020

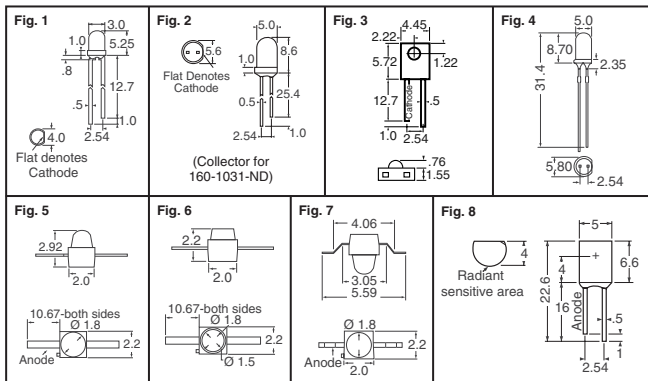
Reflective Sensors

Fig.	Forward Voltage (Maximum)	If (Maximum)	Dark Current (Maximum)	Rise / Fall (ms) (Typical)	Operating Temperature Range	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel Pricing	Avago Part No.
							1	10	100		800	
9	1.6	60mA	100nA	3/4	-25°C - 85°C	516-1720-1-ND	1.16	.99	.85	516-1720-2-ND	510.40	APDS-9101-L21
10	1.6	50mA	100nA	—	-35°C - 65°C	516-1721-ND	1.16	.99	.85	—	—	APDS-9102-L22
11	1.6	60mA	100nA	3/4	-25°C - 85°C	516-1722-ND	1.18	1.01	.86	—	—	APDS-9103-L22
12	1.6	60mA	100nA	—	-25°C - 85°C	516-1723-ND	1.16	.99	.85	—	—	APDS-9104-L22

LITEON Infrared Emitting Diodes, Photodetectors and Photodiodes

Features of Infrared Emitting Diodes: • Selected to specific on-line intensity and radiant intensity ranges • Low cost plastic end looking package • Made with gallium aluminum arsenide window layer on gallium arsenide infrared emitting diodes
Features of Photodetectors and Photodiodes: • Lensed for high sensitivity • Low cost plastic package

Dim. in mm



Photodiodes

Fig.	Description	Digi-Key Part No.	1	Pricing 10	100	Lite-On Part No.
8	Black Plastic Diode	160-1032-ND	.47	3.88	31.00	LTR-516AD

Infrared Emitting Diodes

Fig.	Vf	I (ma)	View Angle	Peak Length (nm)	Digi-Key Part No.	Pricing			T & R † Pricing	Lite-On Part No.
						1	10	100	1,500	
1	1.2	60	20°	940	160-1028-ND	.24	2.00	16.00	—	LTE-4206
2	1.2	50	20°	940	160-1029-ND	.24	2.00	16.00	—	LTE-4208
	1.2	100	40°	940	160-1061-ND	.24	2.00	16.00	—	LTE-5208A
	1.3	100	35°	940	160-1062-ND	.30	2.50	20.00	—	LTE-5228A
3	1.2	50	40°	940	160-1063-ND	.24	2.00	16.00	—	LTE-302
4	1.50	100	30°	875	516-1261-ND	.75	6.25	50.00	—	HSDL-4220
	1.50	100	17°	875	516-1262-ND	.75	6.25	50.00	—	HSDL-4230
	1.40	100	52°	870	516-1706-ND	.39	3.25	26.00	—	HSDL-4261
5	1.50	100	24°	875	516-1263-ND	.75	6.25	50.00	—	HSDL-4420
	1.50	100	24°	875	516-1265-1-ND	.69	5.75	46.00	322.00/M	HSDL-4420#031

Matching Photodetectors

Fig.	Vce	Vec	On-State I (ma)	Rise/Fall (us)	Digi-Key Part No.	1	Pricing 10	100	Lite-On Part No.
1	30	5	2	5	160-1030-ND	.15	1.25	10.00	LTR-4206E
2	30	5	2	5	160-1031-ND	.23	1.88	15.00	LTR-3208E
3	30	5	1	5	160-1065-ND	.23	1.88	15.00	LTR-301

IR Detectors

Fig.	Output Cur. (µA)	Dark Cur. (nA)	Peak Sensitivity (nm)	Forward Voltage (Typical)	View Angle	Digi-Key Part No.	Pricing			T & R † Pricing	Lite-On Part No.
							1	10	100	1,500	
6	1.6	1	875	0.8V	110°	516-1266-ND	.51	4.25	34.00	—	HSDL-5400
5	6.0	1	875	0.8V	28°	516-1267-ND	.51	4.25	34.00	—	HSDL-5420
7	6.0	1	875	0.8V	28°	516-1268-1-ND	.54	4.50	36.00	252.00/M	HSDL-5420#031

† For Tape and Reel part number, change 1-ND to 2-ND. Absolute Maximum Ratings at $T_A = 25^\circ\text{C}$, $\lambda = 940\text{nm}$

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

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