LEDs

Stock Number	λ (nm)	Δλ (nm)	P_I min[1] (µW)	t_r[2]	t_f[2]	Distance (m)	General Comments or Application
IF-E91A	950	40	100	1.0 µs	1.0 µs	<10	Lowest cost device in portfolio for short distance applications
IF-E91D	870	30	200	7 ns	7 ns	< 10	Lowest cost high electrical bandwidth device
IF-E92A	430	65	25	.5 µs	.5 µs	< 50	Blue light for sensor applications in a convenient package
IF-E92B	470	25	75	.6 µs	.6 µs	< 50	Blue light for sensor applications in a convenient package
IF-E93	530	50	95	3.5 ns	16 ns	< 150	Longest distance, since PMMA fiber has very low attenuation at 530 nm
IF-E96	660	20	125	.1 µs	.1 µs	< 75	Lowest cost visible red LED device in portfolio
IF-E97	660	40	250	.5 µs	.5 µs	< 100	High power red LED for low data rates
IF-E98	650	20	200	8 ns	8 ns	< 65[4]	High power, fast electrical switching times for 50 Mbps applications
IF-E99	650	10	700	3.5 ns	3.5 ns	< 100[5]	Very high power device for 100 Mbps LAN applications

1 Optical power measured from the end of a 1 mm core plastic fiber 1 m long, NA=.47 and LED IF =20 mA.

2 Rise and fall times are measured from the 10% to 90% and 90% to 10% points.

3 Exact operating distance depends on the photodetector selected and in some cases the electrical bandwidth of accompanying circuits. These distances are to be used for relative distance comparisons.

4 Distance when mated with the IF-D97 photologic detector.

5 When matched with the IF-D98 photologic detector.

Photodetectors

Stock Number	Type	t_r[1]	t_f[1]	t_p	Responsivity[2]	Threshold[3]	General Comments or Application
IF-D91	Diode	5 ns	5 ns	N/A	1.2 µA/µW	N/A	Highest electrical bandwidth device suitable for analog/digital applications
IF-D92	Transistor	20 µs	20 µs	N/A	50 µA/µW	N/A	Lowest cost, simplest to use photodetector
IF-D93	Darlington	5 ms	2.5 ms	N/A	200 µA/µW	N/A	Highest responsivity linear detector in portfolio
IF-D95T	Logic	70 ns	70 ns	8.0 µs	N/A	1.0 µW -30 dBm	Totem-pole output device for data rates up to 150 kbps
IF-D95OC	Logic	.1 µs	.1 µs	8.0 µs	N/A	1.0 µW -30 dBm	Identical to IF-D95T except with open collector output
IF-D96	Logic			65 ns	N/A	3.5 µW -24.5 dBm	Open-collector output device for data rates up to 5 Mbps
IF-D97	Logic	7 ns	7 ns	12 ns	N/A	17 µW -17.5 dBm	Totem-pole output device for data rates up to 55 Mbps
IF-D98	Logic	3.5 ns	3.5 ns	6 ns	N/A	6.3 µW -22 dBm	Device suitable for data rates up to 155 Mbps[5]

1 Rise times and fall times are measured from the 10% to 90% and 90% to 10% points, respectively.

2 Optical power measured from polished end of 1000 µm plastic optical fiber connected to Helium Neon laser producing radiation at 632.8 nm in wavelength.

3 λ=660 nm.

4 Threshold is the optical power that the photologic switches from a low to high, or from high to low.

5 This device has internal gain control circuitry that makes it unsuitable for applications under 4 Mbps.