

T-41-07

ST Low-Profile Style (ST-LP) LEDs and Integrated Transmitters

The ST-LP devices consist of a Base Part mounted in a Metal ST Low Profile style connector. LEDs and integrated transmitters are assembled to insure the best power output for each dash number. For more information on the Base Part see pages 15 & 16 in this Selection Guide. Specifications are guaranteed limits.

LEDs

Part #	Description	Base Part	Coupled Power Into Fiber				t_r, t_f ns (2)	Pinout			
			μ W	dBm	I_f (mA)	Core (4)		1	2	3	4
HFE4834 -012	Std.LED Metal	HFE4000 -012	5	-23	100	50	10	A	K	G	N
-013		-013	10	-20	100	50	10	A	K	G	N
-014		-014	20	-17	100	50	10	A	K	G	N
-015		-015	30	-15	100	50	10	A	K	G	N
HFE4835 -022	High Speed LED Metal	HFE4003 -022	5	-23	100	50	6	A	K	G	N
-023		-023	10	-20	100	50	6	A	K	G	N
-024		-024	20	-17	100	50	6	A	K	G	N
-025		-025	30	-15	100	50	6	A	K	G	N
HFE4836 -012	Std. LED Plastic	HFE4020 -012	15	-18	50	100	10	A	K	N	N
-013		-013	30	-15	50	100	10	A	K	N	N
HFE4837 -022	High Speed LED Plastic	HFE4023 -022	15	-18	50	100	6	A	K	N	N
-023		-023	30	-15	50	100	6	A	K	N	N
HFE4854 -012	High Power LED Metal	HFE4050 -012	15	-18	100	50	10	A	K	G	N
-013		-013	30	-15	100	50	10	A	K	G	N
-014		-014	50	-13	100	50	10	A	K	G	N
HFE4856 -012	High Power LED Plastic	HFE4070 -012	3	-25	50	50	10	A	K	N	N
-013		-013	10	-20	50	50	10	A	K	N	N
HFE4861 -022	High Speed LED Metal	HFE4053 -022	10	-20	100	50	6	A	K	G	N
-023		-023	20	-17	100	50	6	A	K	G	N
-024		-024	30	-15.2	100	50	6	A	K	G	N
HFE4861 -032	Highest Speed LED Metal	HFE4053 -032	10	-20	100	50	3.5	A	K	G	N
-033		-033	20	-17	100	50	3.5	A	K	G	N
-034		-034	30	-15.2	100	50	3.5	A	K	G	N
HFE4863 -022	High Speed LED Plastic	HFE4073 -022	3	-25.2	50	50	6	A	K	N	N
-023		-023	10	-20	50	50	6	A	K	N	N
HFE4863 -032	Highest Speed LED Plastic	HFE4073 -032	3	-25.2	50	50	3.5	A	K	N	N
-033		-033	10	-20	50	50	3.5	A	K	N	N

IRE D/PINs

Part #	Description	Base Part	Coupled Power Into Fiber				t_r, t_f ns (2)	Pinout				Responsivity A/W
			μ W	dBm	I_f (mA)	Core (4)		1	2	3	4	
HFE4858 -012	Ping Pong - Metal IRED/PIN	HFE4014 -012	5	-23	100	50	20	A	K	G	N	.1
-013		-013	10	-20	100	50	20	A	K	G	N	.1
-014		-014	20	-17	100	50	20	A	K	G	N	.1
HFE4859 -012	Ping Pong - Plastic IRED/PIN	HFE4034 -012	15	-18	50	100	10	A	K	N	N	.06
-013		-013	30	-15	50	100	10	A	K	N	N	.06

Digital Integrated Transmitters ($V_{cc}=5.0V$)

Part #	Description	Base Part	Coupled Power Into Fiber				I_{cc} (mA)	Pinout			
			μ W	dBm	I_f (mA)	Core (4)		1	2	3	4
HFE4839 -012	Standard 10 Mbps Metal	HFE4010 -012	2.5	-26	50	50	65	V	I	G	N
-013		-013	10	-20	50	50	65	V	I	G	N
-014		-014	20	-17	50	50	65	V	I	G	N
HFE4850-012	Std. 10Mbps Plastic	HFE4012 -012	1	-30	12.5	50	20	V	I	G	N

ST Low-Profile Style (ST-LP) PhotoDiodes and Integrated Receivers

The ST-LP devices consist of a Base Part mounted in a Metal ST Low Profile style connector. PhotoDiodes and integrated receivers are assembled to insure the best responsivity for each dash number. For more information on the Base Part see pages 16 & 17 in this Selection Guide. Specifications are guaranteed limits.

PhotoDiodes

Part #	Description	Base Part	Responsivity A/W ⁽⁶⁾	I _b nA ⁽¹⁾	B _{VR} V	t _r ns ⁽²⁾	Cap. pF	Pinout			
								1	2	3	4
HFD3854 -002	Standard	HFD3002 -002	0.45	2.0	110	10.0	1.4	A	K	G	N
HFD3855 -002	Standard	HFD3022 -002	0.45	2.0	110	10.0	2.1	A	K	N	N
HFD3874 -002	High Speed	HFD3013 -002	0.30	1.5	35	2.0	2.0	A	K	G	N
HFD3876 -002	High Speed	HFD3033 -002	0.30	1.5	35	2.0	2.0	A	K	N	N
HFD3887 -002	Standard	HFD3012 -002	0.45	2.0	110	10	3.0	A	N	K	N

Digital Integrated Receivers (TTL Output, V_{cc}=5.0V)

Part #	Description	Base Part	Sensitivity ⁽⁶⁾		I _{cc} mA	P.W.D. ns ⁽³⁾	Output (5)	Pinout			
			μW	dBm				1	2	3	4
HFD3856 -002	Schmitt, 200Kbps	SD3324 -002	5.0	-23	12	-	Std.	V	O	G	N
HFD3857 -002	Schmitt, 200Kbps	SD4324 -002	5.0	-23	12	-	Std.	V	O	G	N
HFD3858 -002	Differentiating, 10Mbps	HFD3000 -002	1.0	-30	20	50	Inv.	V	O	G	N
HFD3859 -002	Differentiating, 10Mbps	HFD3020-002	1.0	-30	20	50	Inv.	C	V	O	G
HFD3878 -002	Direct Coupled, 5Mbps	HFD3023 -002	3.0	-25	15	60	Inv.	V	G	O	G
HFD3880 -002	Schmitt, 200Kbps	HFD3029 -002	1.0	-30	12	-	Std.	V	O	G	N
HFD3883 -002	Schmitt, 200Kbps	HFD3009 -002	1.0	-30	12	-	Std.	V	O	G	N
HFD3885 -002	Direct Coupled, 5Mbps	HFD3003 -002	3.0	-25	15	60	Inv.	V	G	O	G

Analog Integrated Receivers (V_{cc}=5.0V)

Part #	Description	Base Part	Responsivity mV/μW ⁽⁶⁾	Bandwidth (Typical) MHz	Output (RMS) Noise	I _{cc} mA	Pinout			
							1	2	3	4
HFD3866 -002	Linear Output	HFD3026 -002	4	35	0.35mV	10	C	V	O	G
HFD3871 -002	Linear Output	HFD3006 -002	8	25	0.35mV	10	V	O	G	N

Notes (pages 8 & 9):

1. Dark Leakage Current is measured at V_R=5 volts (HFD3874-002 V_R=30 volts.)
2. Response Time is measured between 10% and 90% points.
3. Pulse Width Distortion is measured at 1.5 volts with an input signal of 100μW, 2.5MHz, 50% duty cycle.
4. Transmitter fiber size is either 100/140 micron (100) or 50/125 micron (50).
5. Inv.= Output is low (<0.4 volts) when light is striking the device.
6. Receiver Sensitivity and Responsivity are measured using a 100/140 micron fiber optic cable.

Package Information - ST Low-Profile style

All dimensions are in inches.

Pinout Definition
A = Anode
C = Capacitor
G = Ground (Case)
I = Input
K = Cathode
N = Not Used
O = Output
V = +V (V _{cc})

