

TTL DIGITAL INTEGRATED TRANSMITTERS

All measurements are typical values at 25°C, 850 nm, and $V_{CC}=5.0$ V.

PART NUMBER	DESCRIPTION (2)	P K G #	COUPLED POWER INTO FIBER						I _{cc} (mA)	t _i (nS)	t _f (nS)
			MIN.		TYP.		I _f (mA)	FIBER Core ₍₁₎			
			μ W	dBm	μ W	dBm					
HFE4010 -012	Standard	1	2.5	-26	3.5	-25	50	50	65	14	8
-013	Metal Can	1	10	-20	15	-18	50	50	65	14	8
-014	10 MB	1	20	-17	25	-16	50	50	65	14	8
HFE4012 -012	Low Current, 10MB	1	1	-30	3	-25	12.5	50	20	17	5
HFE4022 -012	Low Current	14	3	-25	7	-21	12.5	100	20	17	5
-013	Plastic Cap, 10MB	14	10	-20	14	-18	12.5	100	20	17	5

Notes:

- Core dia. of 50 = 50/125 micron fiber optic cable, NA = 0.20, graded index, multimode.
Core dia. of 100 = 100/140 micron fiber optic cable, NA = 0.29, graded index, multimode.
- (MB) = Mbps
- t_r , t_f = Measured between 10% and 90% optical output at specified V_{IN} voltage pulse (see data sheet for details.)

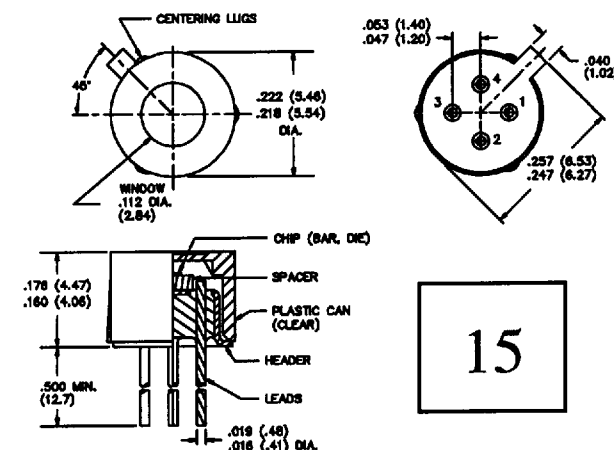
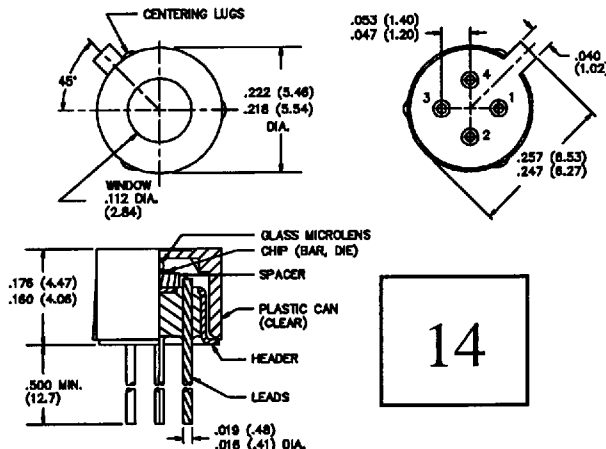
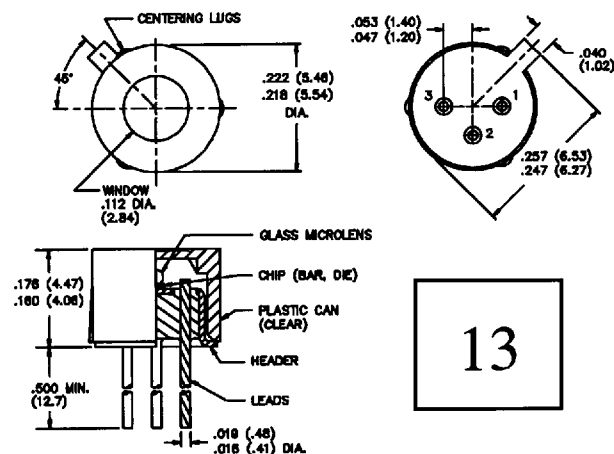
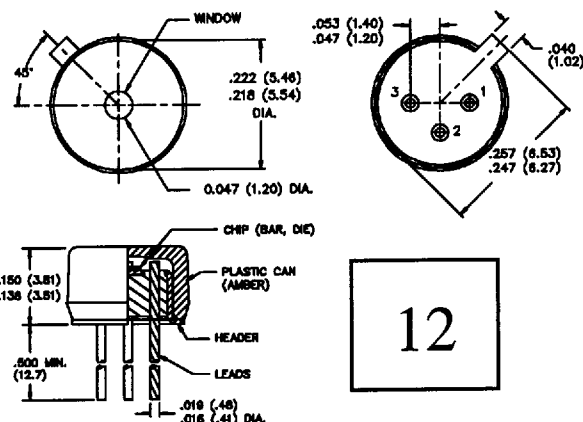
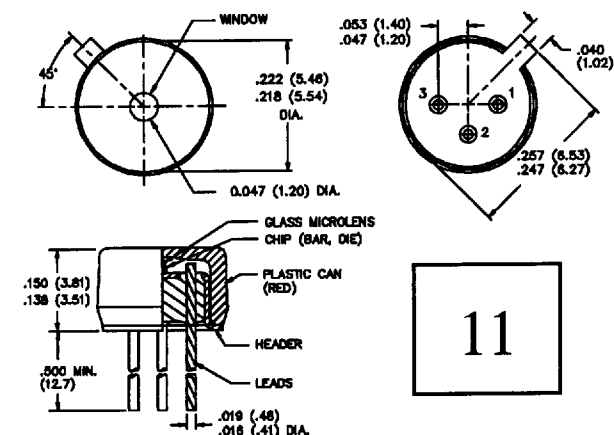
PHOTODIODES

All specifications are typical values at 25 °C unless otherwise specified.

PART NUMBER	DESCRIPTION	P K G #	TYP. FLUX RESPONSIVITY A/W(3)	DARK CURRENT (nA)	RESPONSE TIME (ns)	CAPACITANCE (pF)	WAVE- LENGTH (nm)
HFD3002 -002	Standard	3	0.60	2.0	17 (1)	1.4	850
	Metal Can				5 (2)		
HFD3012 -002	Metal	6	0.55	0.05	4 (1)	3.0	850
HFD3013 -002	High Speed, Metal	2	0.30	1.5	3 (1)	1.5	850
HFD3022 -002	Standard, Plastic	12	0.58	2.0	17 (1)	1.4	850
HFD3033 -002	High Speed, Plastic	13	0.30	1.5	3 (1)	1.5	850

- Notes:
- Response time measured $V_R = 5V$, $t_r = 10\% - 90\%$
 - Response time measured $V_R = 15V$, $t_r = 10\% - 90\%$
 - Flux Responsivity measured with fiber optic cable (100/140, NA = 0.29) centered on mechanical axis, using 850 nm HFE4000 LED.
 - t_r , t_f is tested using PIN = 1.0 mW, $V_O = 0.4V$ to 2.4V for t_r , $V_O = 2.4V$ to 0.4V for t_f .
 - Tested using 100/140 micron fiber optic cable, $f = 2.5$ MHz, $V_{CC} = 5.0V$, Duty Cycle = 50 %.
 - Inverting = Output is low (<0.4 volts) when light is on the detector.
Standard = Output is high (>2.4 volts) when light is on the detector.
 - t_r , t_f is tested using PIN = 1.0 mW.
 - Bandwidth is measured at 0.707 of peak output.

TO-18 Type PLASTIC CAP



COMPONENT PIN OUT RECEIVERS

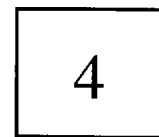
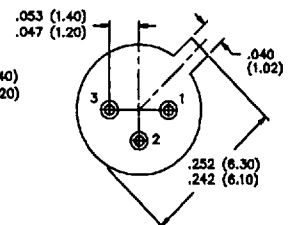
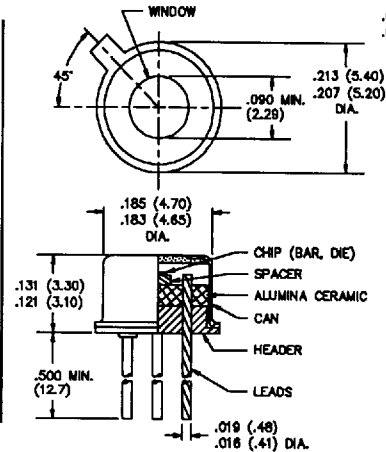
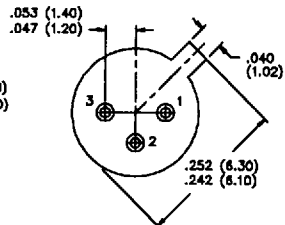
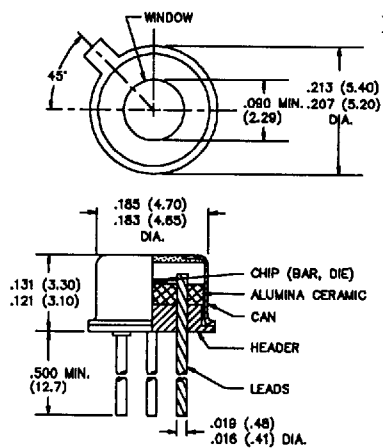
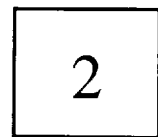
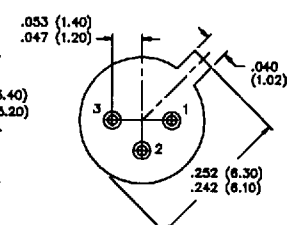
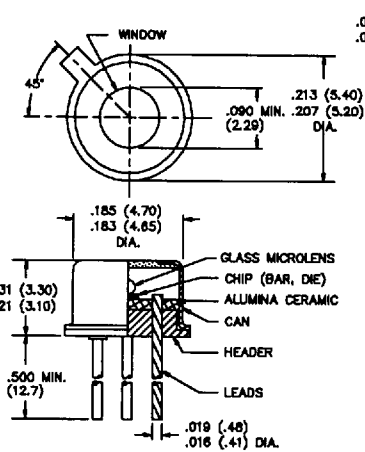
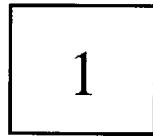
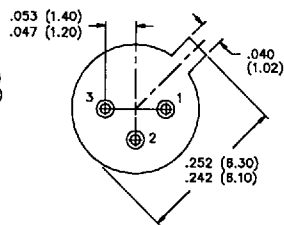
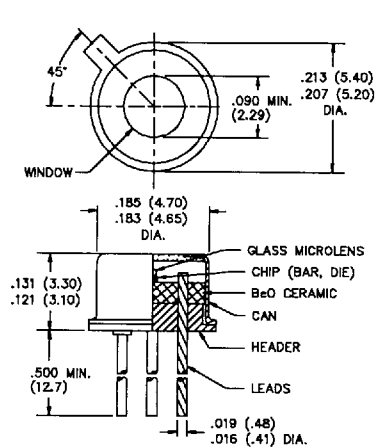
Description	1	2	3	4	Package
HFD3020	C	V	O	G	15
HFD3022	A	K	N	N	12
HFD3023	V	G	O	G	14
HFD3026	C	V	O	G	14
HFD3029	V	O	G	N	13
HFD3031	V	O	G	N	13
HFD3033	A	K	N	N	13
SD4324	V	O	G	N	13

TRANSMITTERS

Description	1	2	3	4	Package
HFE4020	A	K	N	N	11
HFE4022	C	V	O	G	14
HFE4023	A	K	N	N	11
HFE4026	A	K	N	N	11
HFE4070	A	K	N	N	11
HFE4073	A	K	N	N	11

- Notes: 1. All measurements are typical unless otherwise stated.
2. All dimensions are in inches (millimeters).

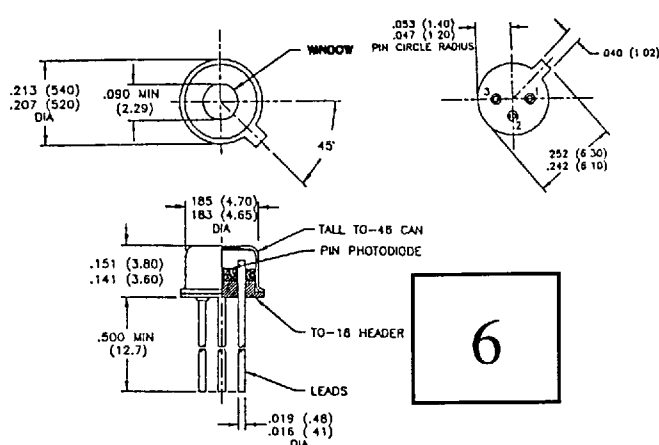
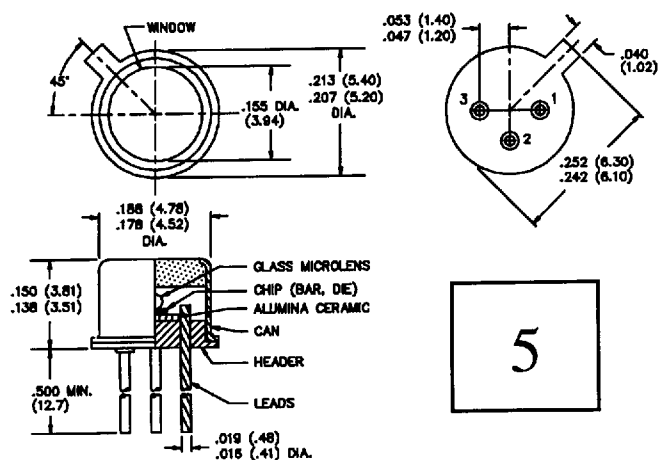
TO-46 Type METAL CAN



- Notes: 1. All measurements are typical unless otherwise stated.
2. All dimensions are in inches (millimeters).

HONEYWELL INC/ MICRO

TO-46 Type METAL CAN



- Notes: 1. All measurements are typical unless otherwise stated.
2. All dimensions are in inches (millimeters).

COMPONENT PIN OUT

RECEIVERS

Description	1	2	3	Package
HFD3000	V	O	G	4
HFD3002	A	K	G	3
HFD3006	V	O	G	4
HFD3009	V	O	G	5
HFD3011	V	O	G	5
HFD3012	A	N	C	6
HFD3013	A	K	G	2
SD3324	V	O	G	5

TRANSMITTERS

Description	1	2	3	Package
HFE4000	A	K	G	1
HFE4003	A	K	G	1
HFE4006	A	K	G	1
HFE4010	V	I	G	1
HFE4012	V	I	G	1
HFE4050	A	K	G	1
HFE4053	A	K	G	1