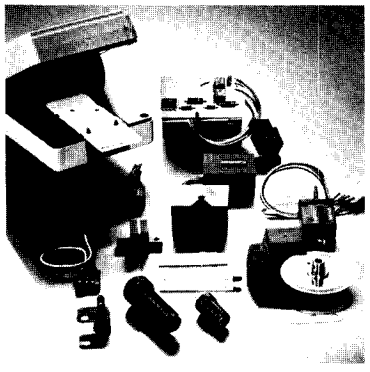
Introduction

Spectronics offers industry's broadest range of optoelectronic products. They include:

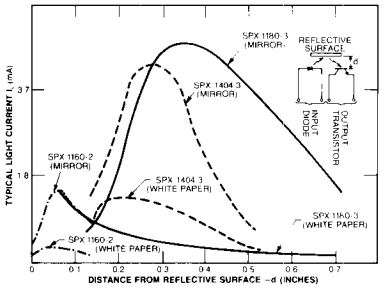
- LEDs
- Silicon photodetectors (Transistor, SCR and IC)
- Optically coupled isolators
- Transmissive switches
- Reflective switches
- V/LED and I/LED displays
- Encoders
- Emitter/Detector arrays
- Discrete chips
- Custom components and assemblies
- Laser diodes
- Pin diodes
- InSb photodiodes
- Mercury cadmium telluride photoconductors
- Fiber optic components
- Fiber optic systems (analog and digital)
- Fiber optic radial couplers



In addition to its standard products, Spectronics can develop custom components, assemblies and systems to meet exact customer requirements. For example, the Spectronics custom assemblies (shown in photo) are used in computers, office equipment, gasoline pumps, aircraft altimeters, point-of-sale terminals, smoke detectors, automobile and aircraft systems. Spectronics has a fully staffed Applications Engineering group to assist you in solving design problems.

Spectronics strives for continuing leadership in high-technology optoelectronic products — today and tomorrow. That's why we're committing substantial resources to research and development efforts for the next generation of optoelectronics.

For more information or the name of your local distributor or representative, contact Spectronics today at (214) 234-4271.



Reflective Switches

(LED with Phototransistor)

Type	LED forward voltage at V_F(volts) typ.	max.	Specified I_F(mA)	Collector-emitter breakdown BV_{CEO} (volts) min.	Light current at (V_{CE} = 5V; I_F = 30mA) I_L(mA) min.	typ.	Specified distance to reflective object in inches (mirror)	Dark current at (I_F = 0, H = 0) I_D(uA) max.	Specified collector-emitter voltage V_{CE}(volts)	Light current rise time (V_{CE} = 5V; I_C = 1mA;) R_L = 1KΩ t_r(μs) typ.	Package style [see page 8 for outline dimensions]
SPX 1180-1	1.3	1.6	50	30	.04	.07	.5	1	30	6	❶
SPX 1180-2	1.3	1.6	50	30	0.125	0.2	.5	1	30	8	
SPX 1180-3*	1.3	1.6	50	10	2.0	4.0	.5	10	10	50 at R_L = 100 Ω	
SPX 1404-1	1.3	1.6	50	30	0.2	0.3	.2	1	30	6	❷
SPX 1404-2	1.3	1.6	50	30	0.4	0.6	.2	1	30	8	
SPX 1404-3*	1.3	1.6	50	10	2.0	4.0	.2	10	10	50 at R_L = 100 Ω	
SPX 1160-1	1.3	1.6	50	30	0.5	.75	.075	1	10	8	❸
SPX 1160-2	1.3	1.6	50	30	1.0	1.5	.075	1	15	10	
SPX 1160-3*	1.3	1.6	50	10	5.0	10.0	.075	1	10	50 at R_L = 100 Ω	

*Photodarlington output.
All others are phototransistor.

-1, -2 and -3 have hermetic components

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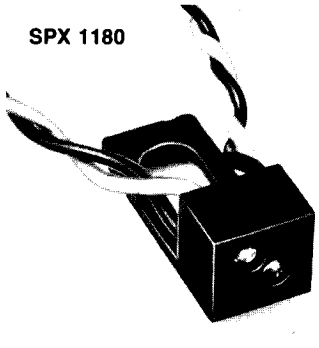
SPX 1180



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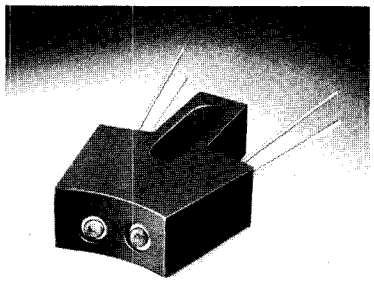

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SPX 1160