

REFLECTIVE SKANNERS

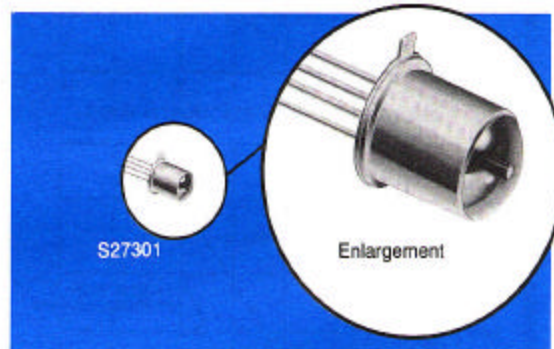
Subminiature LED S27 Series MICRO-SKAN®

Features:

- Smallest Detectable Object: .01 in.
- Optimum Distance to Target: .02 in.
- Field of View: .03 in.
- Maximum Usable Distance: .20 in.
- Small size
- Four styles available
- Printed circuit board mount available
- LED light source
- Coaxial optical system
- Filtered photodetector
- Low cost

Description:

The MICRO-SKAN is a small but complete skanner of simple appearance and economic design, specifically intended for the OEM and high volume industrial market. The unit has excellent shock and vibration resistance and inherent long life. Its quality, performance and reliability meet the high standards of all Skan-A-Matic products. The LED directs infrared energy through a formed epoxy lens to the target. The reflected energy is received by a fiber optic rod at the lens center, then passes through an ambient light



filter to the photodetector.

The S27301 illustrated above is housed in a type TO-18 plated steel can with four gold-plated copper leads. The rigid leads of the basic unit may be plugged into a mating socket or be soldered to a printed circuit board. MICRO-SKAN is also available in a threaded aluminum housing, in a side mounted aluminum block, or already mounted on a P.C. board.

Typical Applications:

- Edge control
- EOT and BOT detectors
- Registration mark sensing
- Small part detection
- Wire break sensing
- Punch card reading

Specifications: (at 25°C)

LIGHT SOURCE—LED

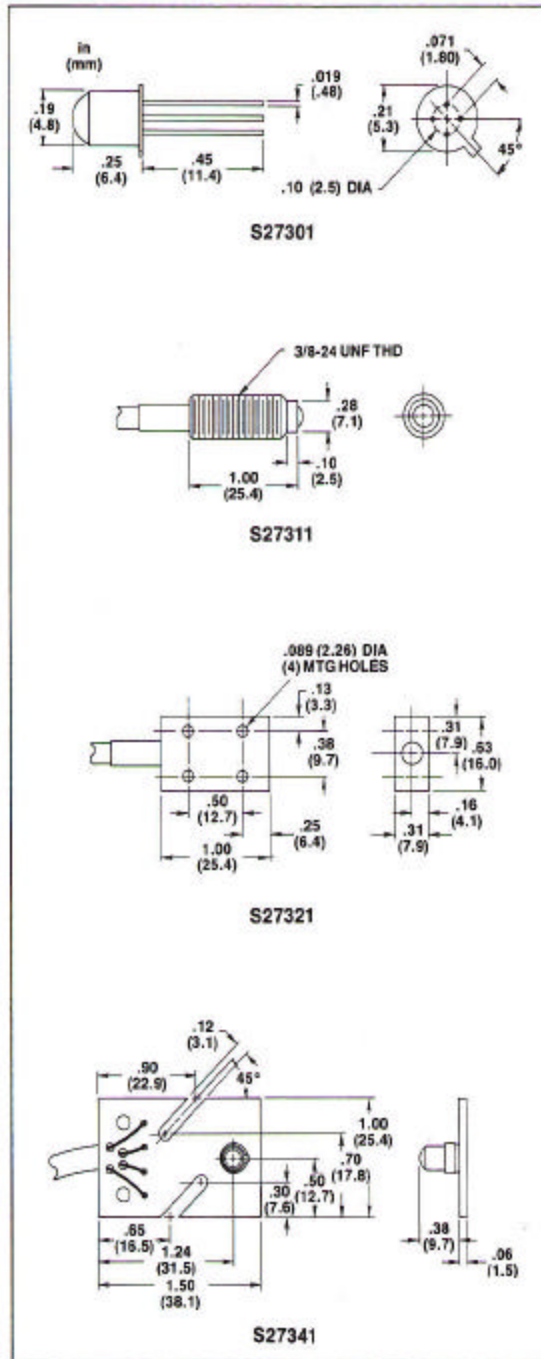
Input	60 mA max. with resultant voltage drop of 1.1 to 1.7 VDC; derate at 1 mA per degree above 25°C ambient
Modulated Input	120 mA max., 50% duty cycle at 1 kHz min.
Reverse Voltage	2 V max.
Spectral Emission	880 nm

PHOTODETECTOR

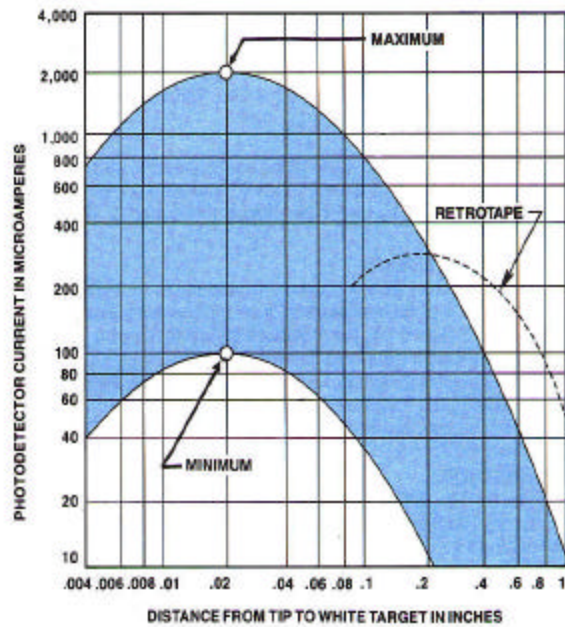
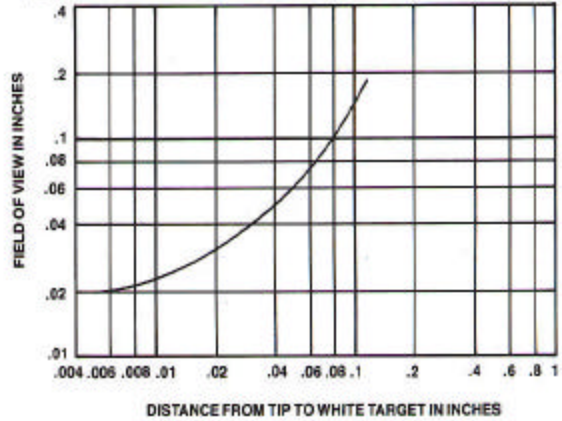
Operating Voltage	30 VDC max.
Response Time	See Response Time Chart under <i>Technical Information</i>
Spectral Response	880 nm peak; filtered to respond to less than 5% at 750 nm and less than 0.1% at 700 nm
Optical Centering	Optical and mechanical axis coincide within ±.010"
BODY TEMPERATURE	See Model Selection Guide Operating: 0° to 50°C Storage: -40° to 50°C
LEADS	See Model Selection Guide

S27 Series

Dimensions:



Typical Performance Chart:



Circles indicate guaranteed test limits. See Quality Control under Technical Information, pg. 16.

Compatibility With Controls:

The S27 Series is compatible with most Skan-A-Matic controls. For high speed operation use the T41300 High Speed Amplifier.

These skanners utilize a 60 mA Light Emitting Diode. A 68 ohm, 1/2 W current limiting resistor is supplied and must be used with Skan-A-Matic controls furnishing 5 VDC for light source power. With modulating controls such as our R42/T42, a 6.8 ohm, 1/4 W current limiting resistor must be used. The S27 Series is not compatible with the R43/T43 modulating controls.

S27 Series

Model Selection Guide:

Part #	Description
S27301	Basic skanner housed in a TO-18 gold-plated steel can with epoxy lens and four gold-plated copper leads

The following models house the basic S27301 skanner and have 6 ft. of 4 conductor, 26 gauge, PVC covered cable with shield. Type G:

Part #	Description
S27311	Threaded aluminum housing
S27321	Side mount aluminum housing
S27341	Glass epoxy printed circuit board mounted

Variations:

LEADS

Extra lead lengths available on the S27311, S27321, and S27341. Use Type G — see pg. 129.

Options:

COIL CORD

Four conductor, 28 gauge, coil cord with shield available in 10 ft. (fully extended) or 20 ft. (fully extended) lengths on the S27311, S27321 and S27341 — see pg. 129.

SHIELDED QUAD

Four conductor, 26 gauge, Teflon covered cable, with shielded photodetector leads and overall shield available on the S27311, S27321 and S27341. Order by adding the suffix -J. Example: S27311-J

PROTECTIVE SHEATH

Can be factory installed over Shielded Quad on the S27311 and S27321. It is not necessary to order the Shielded Quad separately; it is included with the protective sheath at no extra charge. Order by adding the suffix as follows:

- M For square locked galvanized steel with black PVC jacket, 9/32" O.D. Example: S27311-M
- S For square locked stainless steel armor, 3/16" O.D. Example: S27311-S

CONNECTOR

The S27311, S27321 and S27341 are available with connector installed. The mating half is furnished for field connection. Order by adding a suffix as follows:

- P For connector pair with in-line receptacle. Example: S27311-P
- F For connector pair with flanged, panel-mount receptacle. Example: S27311-F

See Options for a more detailed description.

RETROREFLECTIVE TAPE and RETROREFLECTIVE DISCS

Available — see Accessories.

Wiring Diagram:

