

THRUBEAMS

Long Range Modulated L43/P43 Series Super LED Thrubeam

Features:

- Rated Separation: 100 ft.
- Beam Diameter: .40 in.
- Smallest Detectable Object: .15 in.
- Powerful modulated beam
- Glass lens
- Ambient light immunity
- Penetrates many opaque objects
- Penetrates dusty environment

Description:

The L43/P43 Series is a high intensity thrubeam pair designed for photoelectric sensing at long range or through opaque objects. It consists of an LED light source and an amplified photodetector. Each is housed in a threaded, anodized aluminum body which is ideally suited for industrial environments. Sealed lenses make both units dust-tight and water resistant. An infrared filter is included in the photodetector to block visible ambient light.

The photodetector employs an AC coupled, voltage output amplifier which must operate in a modulated mode. **The L43/P43**



pair should therefore be used only with an R43/T43 "Super Pulser." This control modulates the LED, amplifies the detected signal and optimizes system performance.

When properly aligned in a clear atmosphere and used in conjunction with the Super Pulser, the L43/P43 pair can sense over a 100 ft. range or through many solid or opaque objects. The beam diameter between light source and photodetector is approximately .40 inch. The units may also be positioned side by side at a 35 ft. distance from a 3 inch retro-disk for retroreflective applications.

Typical Applications:

- Safety barriers
- Security barriers
- Missing label detection
- Detection of an object on a conveyor
- Detection of a product in a package

Specifications: (at 25°C)

LIGHT SOURCE—LED

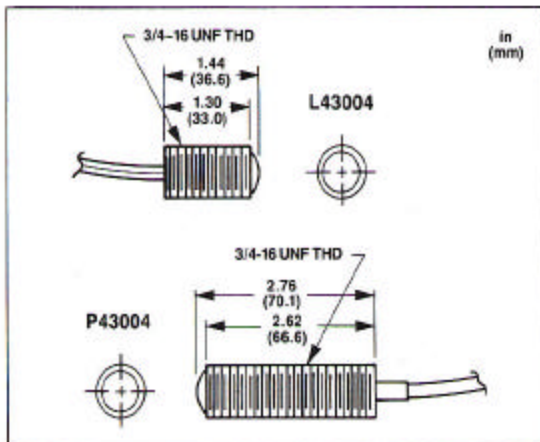
Input	100 mA max. with resultant voltage drop of 1.1 to 1.7 VDC; derate at 1 mA per degree above 25°C ambient
Modulated Input	1 A max., 10% duty cycle at 1 kHz min.
Reverse Voltage	2 V max.
Spectral Emission	940 nm peak
BODY	Red anodized aluminum
TEMPERATURE	Operating: 0° to 50°C Storage: -40° to 85°C
LEADS	2 cond. 22 ga., PVC covered cable, 6 ft. long, Type E

PHOTODETECTOR

Operating Voltage	± 5V to ± 15VDC
Spectral Response	910 nm peak; filtered to respond to less than 5% at 750 nm and less than 0.1% at 700 nm
BODY	Blue anodized aluminum
TEMPERATURE	Operating: 0° to 50°C Storage: -40° to 50°C
LEADS	4 cond. 26 ga. PVC covered cable with shield, 6 ft. long, Type L

L43/P43 Series

Dimensions:



Compatibility With Controls:

The L43/P43 are designed exclusively for use with the R43/T43 Series modulating controls.

Model Selection Guide:

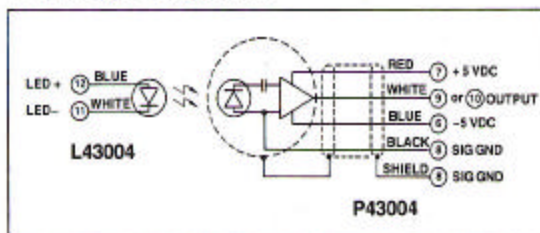
Part #	Description
L43004	Light Source
P43004	Photodetector

Variations:

LEADS

Extra lead lengths available. See pg. 129.

Wiring Diagram:



Circled numbers denote connection to socket of R43/T43 Series "Super Pulsar."