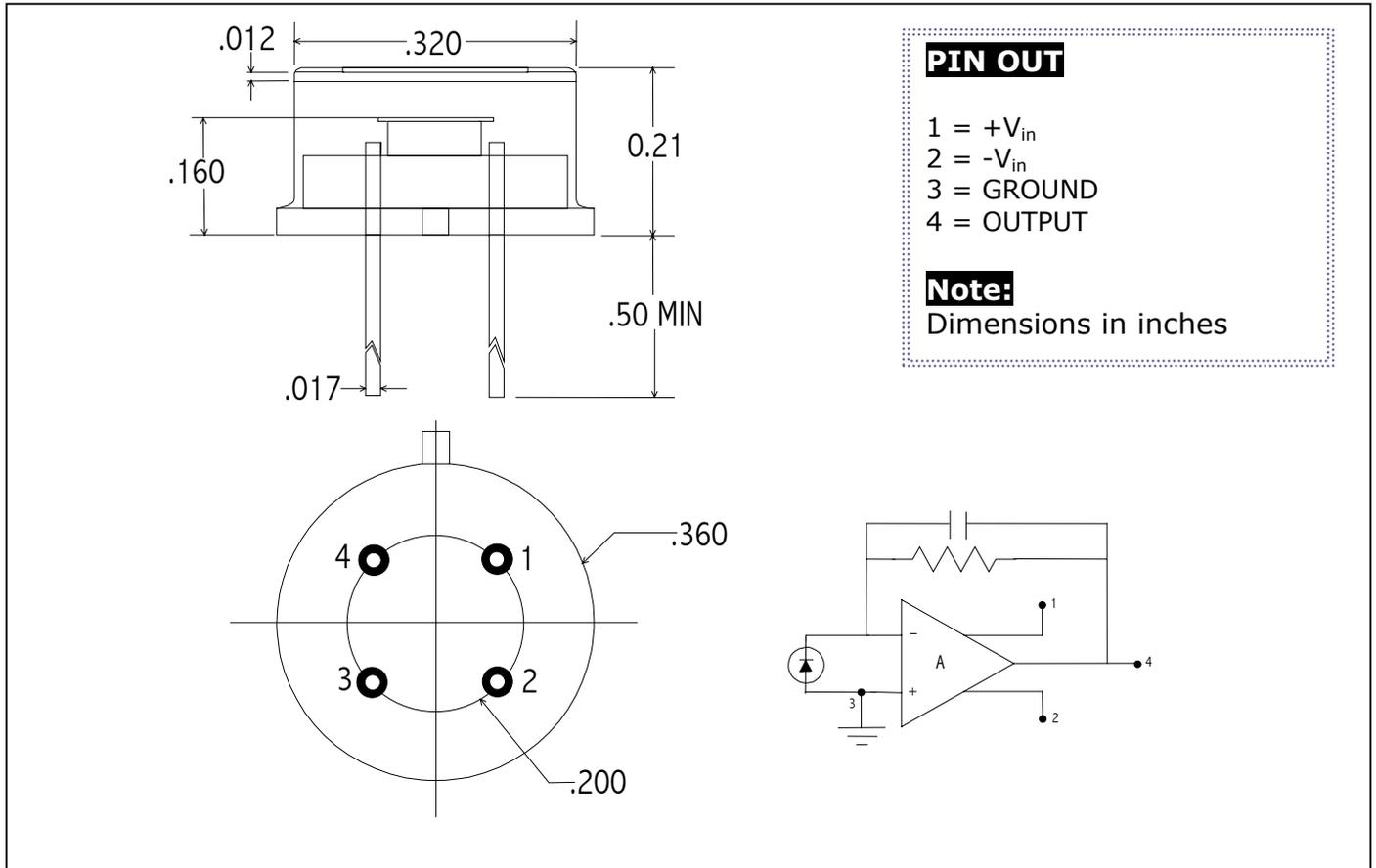


## E5 - SERIES TO - STYLE RECEIVERS



**Application Note** The preamplifier portion of this receiver is a transimpedance current to voltage converter. Its output voltage is proportional to the input signal current:

$$V_{out} = I_{signal} \times R_{feedback}$$

This photodiode/amplifier is a DC coupled, high gain system and care should be taken to shield the unit from stray light during operation. This will help prevent saturation of the amplifier, which could lead to failure of the unit. Obtaining stable, long term operation will require suitable heat sinking.

### SPECIFICATIONS

Detector Type	1mm Dia Silicon Photodiode			
Wavelength Range	300 - 1000 nm			
Part Number	S-010-E5/2k	S-010-E5/20k	S-010-E5/1M	S-010-E5/10M
Output Responsivity, V/W	10 <sup>8</sup> @ 850 nm	10 <sup>7</sup> @ 850 nm	10 <sup>5</sup> @ 850 nm	10 <sup>4</sup> @ 850 nm
Output Noise, V/Hz <sup>1/2</sup>	1.6 x 10 <sup>-6</sup>	0.6 x 10 <sup>-6</sup>	0.3 x 10 <sup>-6</sup>	0.03 x 10 <sup>-6</sup>
Bandwidth	DC - 2kHz	DC - 20kHz	DC - 1MHz	DC - 10MHz
Power Requirements	+,- 5VDC to +,- 15VDC, 10 mA			