



## product introduction

Smart Vision Lights have linear Polarizers available. Polarizing filters can reduce reflections on specular surfaces. A polarizer can be added in the field. Kit comes with mounting screws and push-in inserts.



## product features



- Transmittance: Single – 38%
- Color: Neutral Gray
- Polarizing Efficiency: 99.98%
- Wavelength: 400~700nm
- Thickness: .030" (.762mm)
- Direction: Linear
- Includes Mounting Tabs And Screws

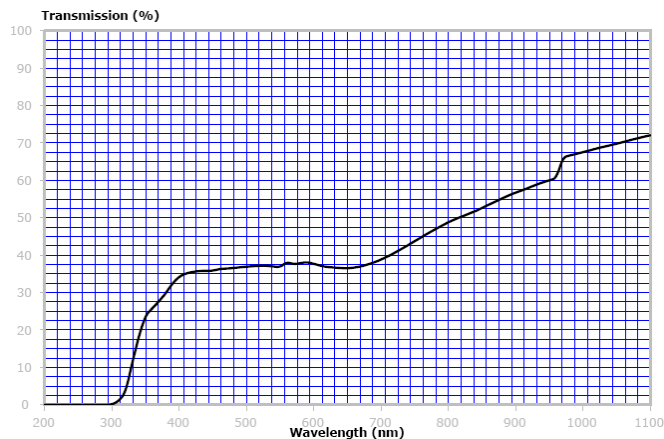


## product specifications

<b>Transmittance</b>	Single – 38%
<b>Efficiency</b>	99.98%
<b>Wavelength (nm)</b>	400-700nm
<b>Direction</b>	Linear



## use with high power LEDs



High Power LED's are increasing in output through continued product development by LED manufacturers. High Power LED's in white are now available in 100+ lumens in output intensity. Smart Vision Lights continues product improvement by using the highest power LED's available. The new High Power LED's can damage a linear polarizer. A Linear Polarizer has a typical transmission of 38% while blocking 62% of the light not in the polarization plane. The 62% of light blocked is energy that is turned into heat. This heat must be dissipated or a breakdown of the material will occur over time. Linear Polarizers currently available cannot dissipate the heat when the latest 100+ lumen high power LED's are used in lights.



## product specifications



### Attention

Please note that operating lamps in constant ON may result in permanent damage to the polarizer. Light operation should be limited to a 10% duty cycle to prevent premature degradation of polarizer.

The Linear Polarizer material will fail when the LED light is used in a constant operation. Smart Vision Lights mandates a limited exposure time for linear polarizers. Using the Light in strobe application will limit the exposure time and heat energy needed to be dissipated by the linear polarizer. A 10% duty cycle or less is recommended when a linear polarizer is used on a light.

Duty Cycle (D) is defined as the ratio between Strobe Time and Rest Time

Recommend Duty Cycle for Linear Polarizer is 10%

Calculating Rest Time = Strobe Time / Duty Cycle

$$RT = \frac{ST}{D} \left( \begin{array}{l} S_T \text{ is Strobe Time} \\ R_T \text{ is Rest Time} \\ D \text{ is Duty Cycle} \end{array} \right)$$



## insert specifications

### Inserts - "push in"

Smart Vision Lights recommends installing the brass inserts with a blunt object. The inserts are best installed in the bottom of the slot see figure 1. The insert can be installed by pushing the inserts into the slot from the side see figure 2.

Heating the insert with a heat gun will help with less force and an easier install. If heating is used, heat the insert. DO NOT heat plastic housing on the light.



Fig 1. Insert at bottom of slot ready to be pushed in



Push on top teeth

Fig 2. Pushing insert into Housing

### Installing the diffuser or polarizer

Use 6 inserts/screws for a Linear light and 3 inserts/screws for a Brick light. Snug down screws to diffuser or polarizer. Over tightening screws can break diffuser/polarizer or inserts will begin to pull toward surface. Do not over tighten with excessive force. For added stability on a permanent installation, a thread locking compound may be used on the screw.



Fig 3 - Correctly installed insert



Fig 4 - Correctly installed insert