

Smart Vision Lights have Diffuser kits available. Diffusers can widen the angle of light emission and reduce reflections. A Diffuser can be added in the field for the S30 and ODS30.

Diffuser Kit for S30 & ODS30 includes acrylic diffusers and linear polarizer.

Diffuser Specifications

- Transmittance: single matte: 92%
- Transmittance: single white: 50%
- Color: Transparent or White
- Wavelength Transmission: 400~1000nm
- Thickness: 3mm (.118")



Heat

Operating Temperature Range -30°F (-34°C) up to +160°F (71°C).

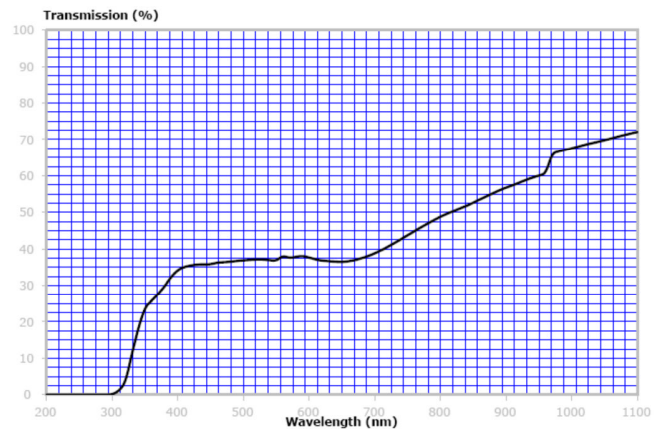
Material

General Purpose Acrylic

Smart Vision Lights have linear Polarizers available. Polarizing filters can reduce reflections on specular surfaces. A polarizer can be added in the field.

Linear Polarizer Specifications

- Transmittance: single: 38%
- Color: neutral gray
- Polarizing efficiency: 99.98%
- Wavelength: 400~700nm
- Thickness: .030" (.762mm)
- Direction: Linear



LINEAR POLARIZER LIFETIME

Use of Linear Polarizer and High Power LEDs

High Power LED's are increasing in output thru 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.

Strobing Linear Polarizers on Lights

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 - R_T

$$R_T = \frac{S_T}{D}$$

$\left[\begin{array}{l} S_T \text{ is the Strobe Time} \\ R_T \text{ is the Rest Time} \\ D \text{ is Duty Cycle} \end{array} \right]$