



MATERION

// BALZERS OPTICS

# NightVision™ Filter

## VIS-light blocker with high IR Transmission

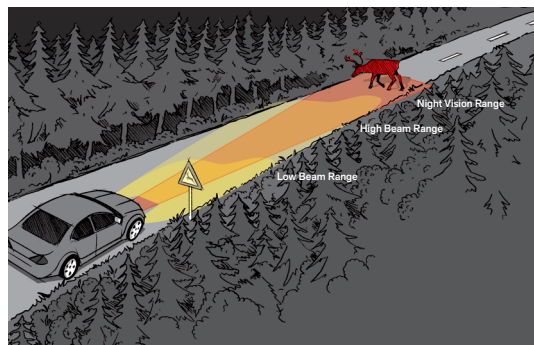
With night vision systems, carmakers are setting new standards in order to spare drivers critical situations while traveling during the nighttime. Materion Balzers Optic's NightVision™ Filter offers as yet unsurpassed performance, making maximum near-infrared light throughput while reducing the visible light by a factor of 1000 with no visible red leakage. This allows the reproduction of objects on the display to be significantly improved.



## Benefits

Challenges and properties:

- Color within ECE white
- Red color compensation
- Cut on as short as possible  
< 800 nm with no temperature shift
- Maximum visible blocking
- Maximum NIR throughput
- Meet all automotive environmental requirements



## Applications

The new active night vision system for road traffic, which uses NIR radiation, provides enhanced visibility during night-time driving. The system is equipped with a NightVision™ filter developed by Materion Balzers Optics. This more than doubles visibility without hampering oncoming traffic by your headlights. The technology also ensures that the infrared lamp cannot be confused with taillights.

## Technical Data

### Heat resistance

up to 400°C

### Adherence (MIL-M-13508 C, para. 4.4.6)

Scotch tape test

### Humidity (MIL-M-13508 C, para. 4.4.7)

240 h at 49°C and r.h. 95%

### Salt Fog (MIL-M-13508 C, para. 4.4.8)

24 h salt spray 4,5% NaCl

### ROHS compliant

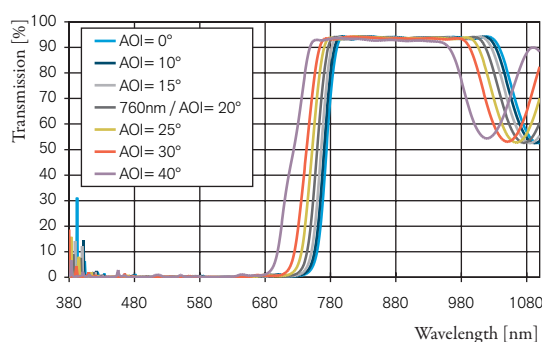
### Typical spectral properties

T < 0.2% avg. 420–700 nm

T = 50% @ 760±10 nm

T > 90% avg. 800–1000 nm

## Typical spectral curves of NightVision™ filter



## Color within ECE white even at large angle of incidence

