High Reflective Coatings

Now PHOTOP can provide all kinds of high reflective coatings as follows:

- Dielectric High Reflective Coatings
- Metallic High Reflective Coatings
- Diode Pumped Laser Optics Coatings

**Dielectric High Reflective Coatings (DHR):**

DHR coating is designed to produce very high reflection (more than 99.8% at designed wavelength). They are generally used in a single wavelength laser cavity where the lowest cavity loss at a center wavelength is essential. PHOTOP can provide such coating with center wavelength from 250 to 2200 nm according to customer's requirement.

![Graph showing reflectance vs wavelength for DHR coatings](image-url)

**Graph 1:** Reflectance (%) vs Wavelength (nm)

- Illuminant: White
- Medium: AIR
- Substrate: Glass
- Exit: Glass
- Angle: 0.0 (deg)
- Reference: 1500.0 (nm)
- Polarization: Ave
- First Surface: Front

- R > 99.8% @ 1064 nm

![Graph showing reflectance vs wavelength for DHR coatings](image-url)

**Graph 2:** Reflectance (%) vs Wavelength (nm)

- Illuminant: White
- Medium: AIR
- Substrate: Glass
- Exit: Glass
- Angle: 0.0 (deg)
- Reference: 1500.0 (nm)
- Polarization: Ave
- First Surface: Front

- R > 99.8% @ 1500 nm
**Metallic High Reflective Coatings (MHR):**

**PHOTOP** provides metallic high reflective coatings by material of Au, Ag, Al, Cr, and Ni-Cr. Their reflectivity is not higher than dielectrics HR coatings, but their HR spectrum can be over near-UV, visible and near-IR. These coatings are applied to where a consistent high reflection in a wide spectral range is necessary. In order to prevent these metallic coatings from oxidization, these coatings have been deposited on a layer of dielectrics coating.
Diode Pumped Laser Optics Coatings (DPC):

PHOTOP provides the following coatings for the Nd-Laser applications. These coatings are deposited on substrates of BBO, KTP, Nd:YVO₄, Nd:YAG and BK7 and mainly used to Nd Laser and their harmonic generation.

![Graph of Reflectance vs. Wavelength](image1)

- **Illuminant:** White
- **Medium:** AIR
- **Substrate:** Nd:YVO₄
- **Exit:** Nd:YVO₄
- **Angle:** 0.0 (deg)
- **Reference:** 1555.0 (nm)
- **Polarization:** Ave
- **First Surface:** Front

HR@1064nm & HT@532nm on Nd:YVO₄

- R > 99.8% @ 1064nm
- R < 5.0% @ 532nm

![Graph of Reflectance vs. Wavelength](image2)

- **Illuminant:** White
- **Medium:** AIR
- **Substrate:** Nd:YVO₄
- **Exit:** Nd:YVO₄
- **Angle:** 0.0 (deg)
- **Reference:** 1310.0 (nm)
- **Polarization:** Ave
- **First Surface:** Front

HR@1064nm & HT@808nm on Nd:YVO₄

- R > 99.8% @ 1064nm
- R < 5.0% @ 808nm

![Graph of Reflectance vs. Wavelength](image3)

- **Illuminant:** White
- **Medium:** AIR
- **Substrate:** Nd:YVO₄
- **Exit:** Nd:YVO₄
- **Angle:** 0.0 (deg)
- **Reference:** 1555.0 (nm)
- **Polarization:** Ave
- **First Surface:** Front

HR@1064nm & HT@808nm on Nd:YVO₄

- R > 99.8% @ 1064nm
- R < 5.0% @ 808nm