



MATERION

// BALZERS OPTICS

Dental Mirror

Dental Mirror for Dentistry and Intra-Oral-Scanner

The dental mirror is an important diagnostic instrument often used for observation and illumination in dentistry. Materion Balzers Optics dental mirror products provide excellent optical and durability performance for dental application. The optimized coating designs provide much higher reflectivity compared to the conventional mirrors used and this gives the dentist a brighter and much clear image of the indirect visual fields in parts of the mouth that are difficult or impossible to see directly. The excellent durability of our mirrors means it can survive frequent autoclave sterilization. Materion Balzers Optics can provide the mirror and the plastic handle as a packaged total solution too.



Benefits

- High reflectivity dielectric coating technology specific to dental mirrors application
- Covering VIS from 420nm to 680nm
- Excellent surface profile to achieve high resolution imaging or scanning performance
- Excellent thermal resistance up to 200°C
- Excellent environmental durability for >150 cycles of autoclave sterilization process up to 130°C
- Integrated handle is optional

Applications

- Dental Mirror
- Intra-Oral Scanner

Technical Data

Wavelength range 420 nm - 680 nm

AOI 0 - 45°

Reflectance

Ravg ≥ 98 % in the 420 - 680nm at AOI=0°

Ravg ≥ 98 % in the 420 - 680nm at AOI=45°

Surface Profile

Flatness ≤ 1μm

Dimensions

Customized, typical OD25mm or 25x25mm

Environmental Durability

High temp: -40°C/2.5hrs - 71°C/2.5hrs, 5 cycles

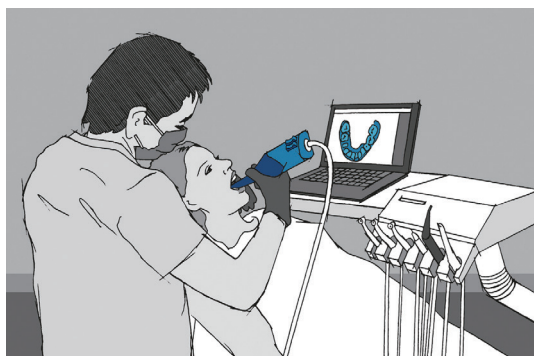
Thermal shock: +85°C, RH: 85 - 95% for 24 hours

Humidity: 95% relative humidity and 49°C for 10days

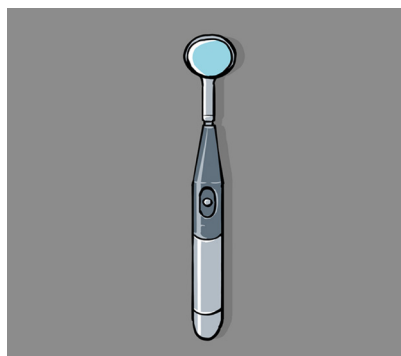
Salt spray (Fog): 35°C ±2°C 24h, 4.5%NaCl

Autoclave sterilization test: 130°C water vapour /15min , 150cycles

Schematic of Intra-Oral-Scanning Application



Schematic of Oral Diagnosis Application



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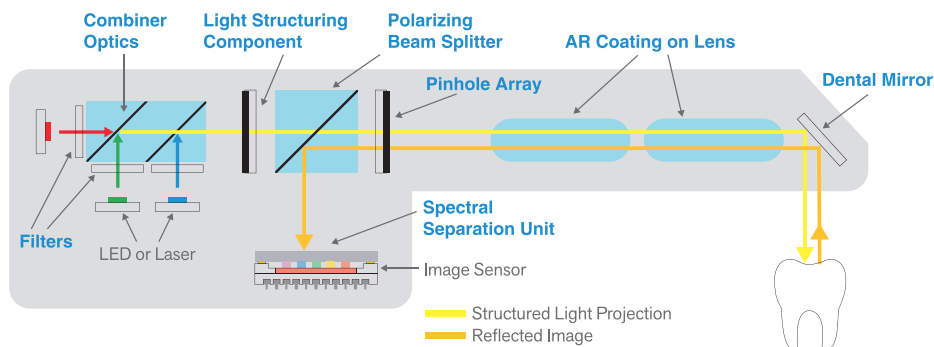
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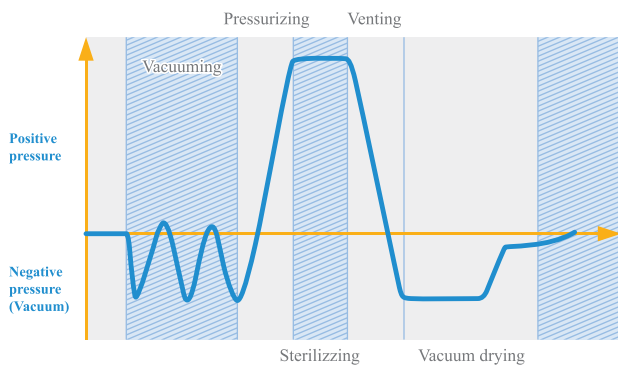
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Subject to technical change without notices

Schematic of Intra Oral Scanner

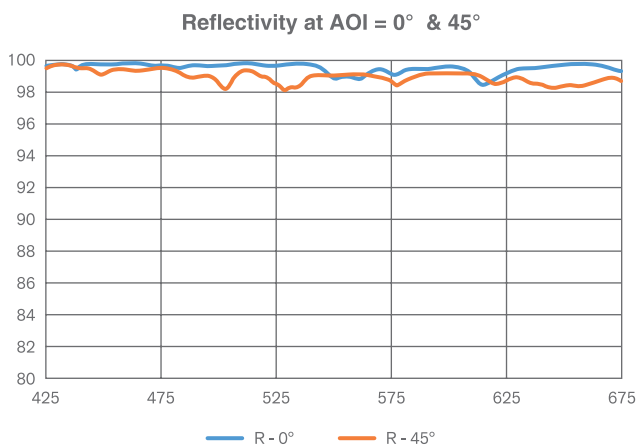


Typical Autoclave Sterilization Process



Dental Mirror Spectrum

Reflectivity at AOI = 0° & 45°



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