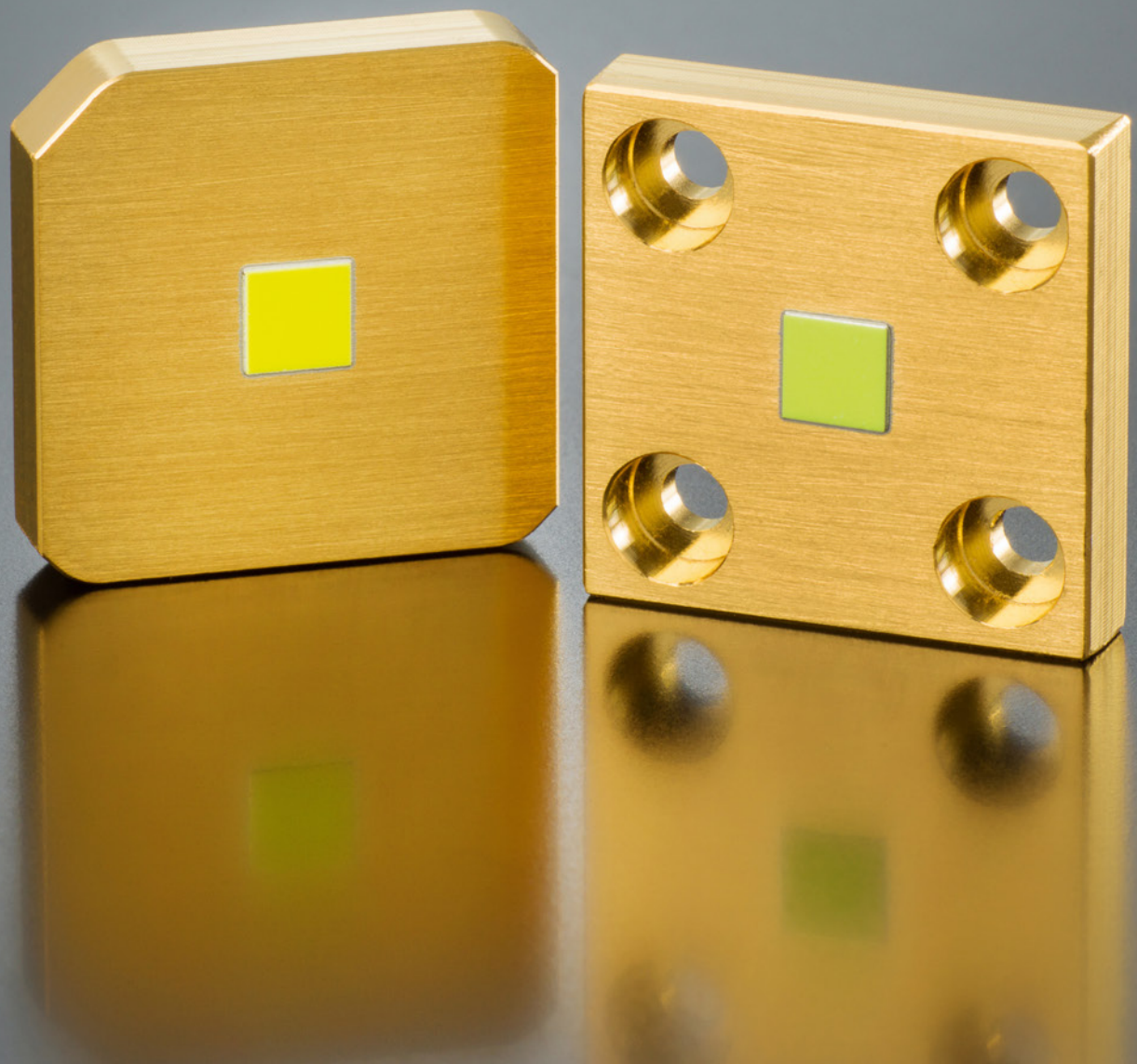
SCHOTT
glass made of ideas

# Static Ceramic Converter

## Enabler for High Luminance Light Sources



# Static Ceramic Converter – Enabling high luminance without moving parts for your laser pumped phosphor light sources

SCHOTT experts have developed phosphor ceramic converters for laser pumped phosphor light sources. This material allows high irradiance and superior luminance. Assembled on a heat spreader these components enable compact light sources without moving parts. This is a 100 % inorganic solution offering high reliability.

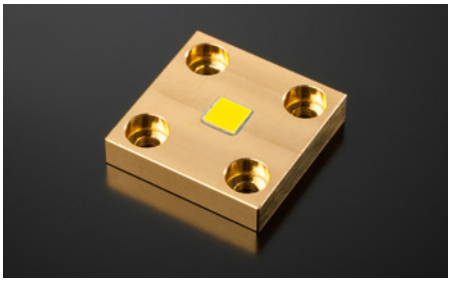
## Advantages

Your brighter solution from SCHOTT is based on:

- Highest luminance
- Superior reliability
- 100 % inorganic solution
- High irradiance limit
- Compactness, no moving parts

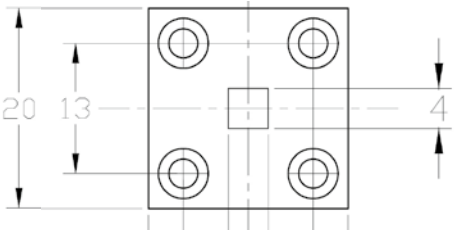
## Applications

- Digital Projection
- Searchlights
- Medical Lighting e.g. Endoscopy
- Life Science
- Stage Lighting



## Standard Sample

| Heat spreader dimension: W x L x T (mm) | Phosphor material dimension: W x L x T (mm) |
|---|---|
| 20 x 20 x 4 | 4 x 4 x 0,150 |
| Customized formats on request | |




– Available without holes for large volumes
– Detailed drawings are available on request

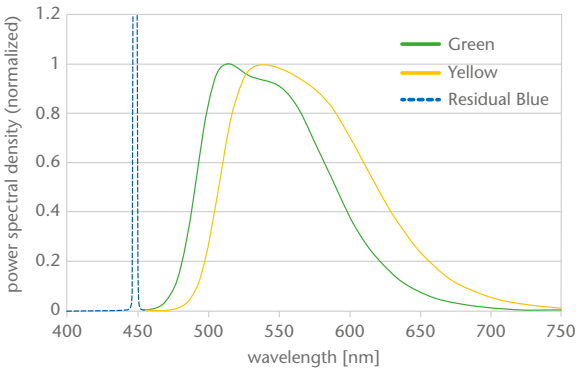
## Technical Details

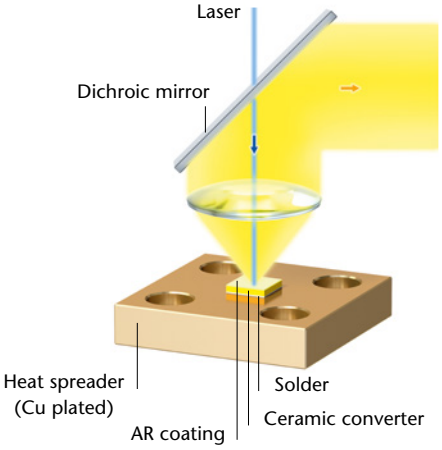
| Technical features | | | | | Remarks |
|---|---|---|---|---|---|
| Tradename | Yellow | Green | White (5000K) | White (6000K) | |
| Type | Anti-reflection coated ceramic on heat spreader | | | | |
| **Optical specifications** | **Emission spectrum** | | **Full spectrum** | | |
| Conversion efficacy | > 280 lm/W | > 280 lm/W | > 250 lm/W | > 250 lm/W | |
| Color coordinates | $c_x$: 0.417 ± 0.01<br>$c_y$: 0.557 ± 0.01 | $c_x$: 0.333 ± 0.01<br>$c_y$: 0.588 ± 0.01 | $c_x$: 0.341 ± 0.02<br>$c_y$: 0.392 ± 0.02 | $c_x$: 0.324 ± 0.02<br>$c_y$: 0.346 ± 0.02 | Color coordinates are defined within the CIE 1931/2° color space |
| **Material properties** | | | | | |
| Irradiance limit | up to 50 W/mm² | | | | Depends on laser spot size<br>Ask for detailled report |
| Article Number | 1665456 | 1682884 | 1773714 | 1773713 | |

**Please contact SCHOTT**

- For details on measurement methods and precision
- For customer specific material developments

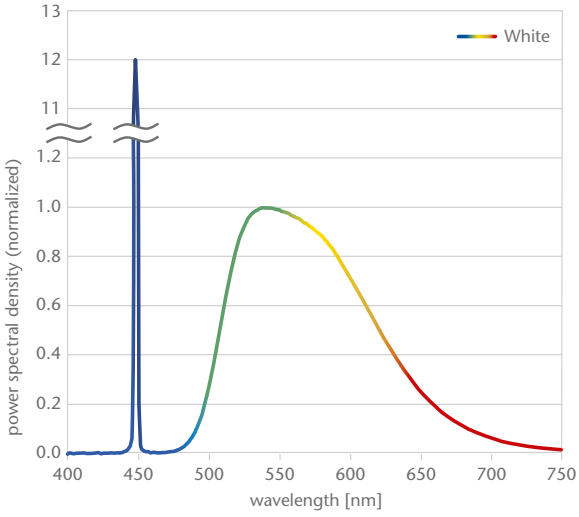
## How does it work for green or yellow light?

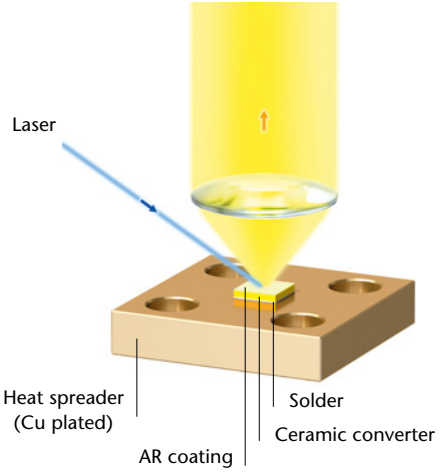


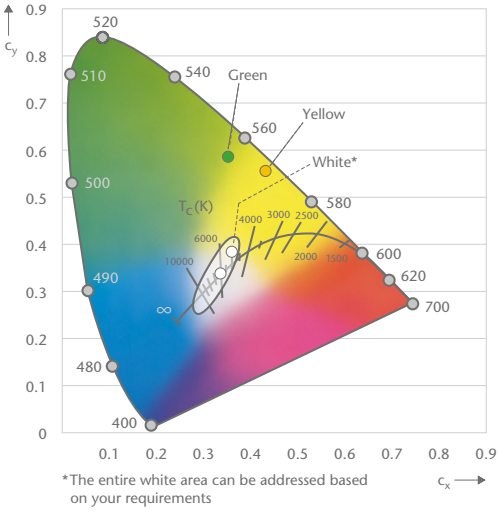

Blue laser light is applied via a dichroic mirror. This also blocks residual blue light, that is reflected from the sample. The pure emission spectrum of green or yellow light serves applications like digital projection or stage lighting.

## How does it work for white light?




For white light generation, the material is designed for diffuse reflection of just the right portion of blue light to meet the desired color coordinates.




Color coordinates of yellow, green and white Ceramic Converter material in the CIE 1931/2° color space

| Available Variations |
|---|
| Heat spreader geometry |
| Die format |
| Die thickness |
| Color |

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