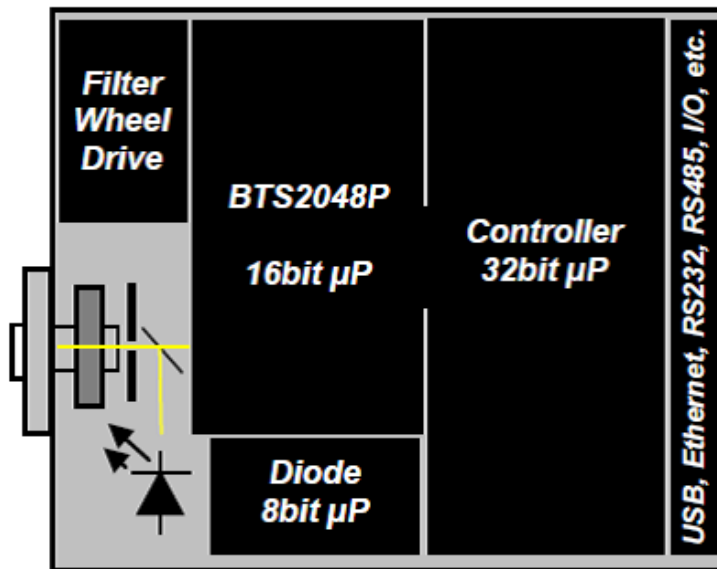




## High-Tech Spectral Light & Color Meter Design

*Fast accurate spectral photometric, radiometric and colorimetric measurements utilizing unique optical design & innovative technology*



BTS2048-VL Design Schematic

The BTS2048-VL employs the Gigahertz-Optik BiTec Sensor Technology which combines a photopic filtered photodiode for integral measurements and a CCD array spectrometer for spectral measurement.

Three microprocessors are used to control the instrument, an 8-bit for the photodiode, 16-bit for the CCD and a high power ultrafast 32-bit (200MHz) to control the entire system.

A diffuser input optic is installed for a cosine corrected measurement geometry, a prerequisite for accurate illuminance measurement. Light entering through the diffuser is shared between the photodiode and CCD within the same field of view.

The spectral components of the BTS2048-VL include an entrance slit, collimating mirror, diffraction grating, focusing mirror and a 2048 pixel CCD with a 'Crossed Czerny Turner' design. This optimized optical design helps to minimize aberrations and scattered light.

The spectral data measured by the CCD is used for on-line correction of any spectral mismatch error of the photopic filtered photodiode.

For complete technical specifications

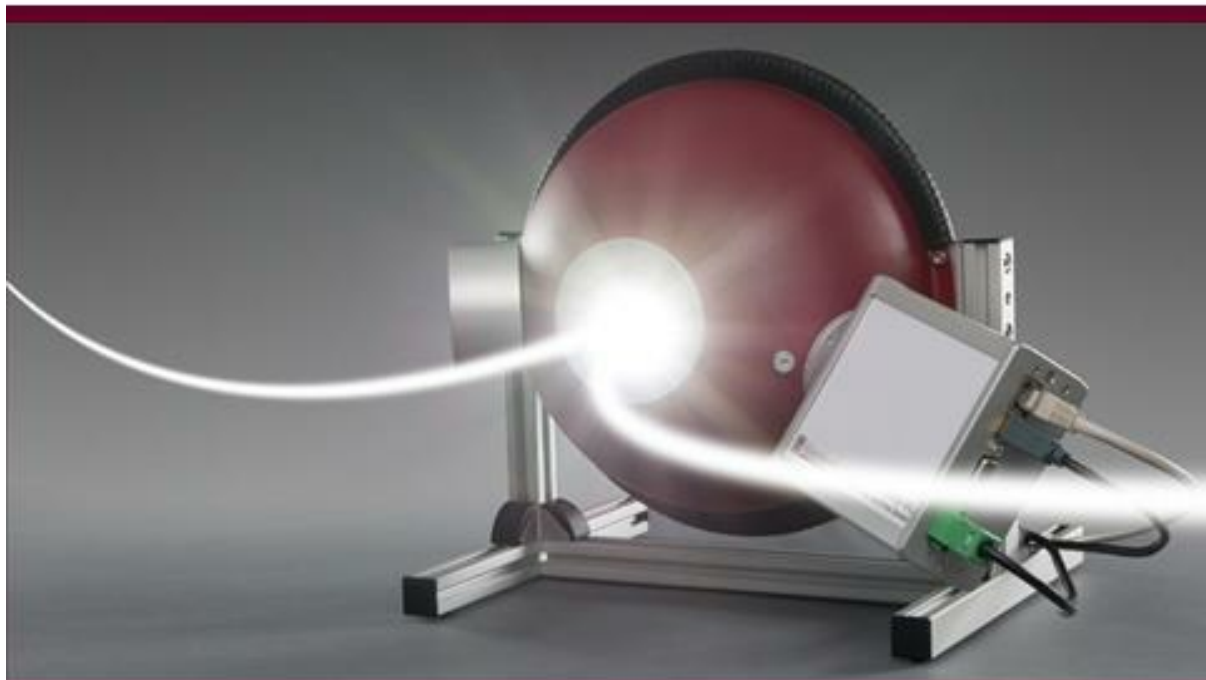
[BTS2048-VL Spectral Light & Color Meter](#)

*Next technical note in series: BTS2048-VL's integrated filter wheel*

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A system solution provided by Gigahertz-Optik GmbH

Gigahertz-Optik's BTS2048-VL spectral light & color meter plus ISD-21 integrating sphere. See the entire BTS series spectral light and color meters at

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Gigahertz-Optik is a world class manufacturer of innovative UV-VIS-NIR optical radiation measurement instrumentation for specification critical industrial, medical and research applications.

