OVMed®

OCHTA Cable Module product brief

World's Smallest Cable Module with Mini-LED Illumination for Single-Use Endoscopes

lead free

available in a lead-free package

OmniVision's OVMed® OCHTA cable module is a fully-integrated medical-grade imaging subsystem for single-use endoscope and catheters. The cable module combines the world's smallest camera module with upgraded OVMed® cables and mini-LED illumination for a complete, fully medically-tested assembly. It provides excellent image quality that reduces cost and shortens time-to-market.

The OCHTA cable module integrates OmniVision's OH0TA image sensor, which is even smaller than its Guinness World Record-holding predecessor, quadruples resolution and provides wafer-level optics in a single compact assembly. The uniquely small size of the OCHTA cable module enables endoscopic devices to reach deeper into the body for a wide range of procedures including neuro, ophthalmic, ENT, cardiac, spinal, urology, gynecology, and arthroscopy; it can also be used for dental and veterinary applications. The integrated mini-LED illumination feature provides surgeons with precise brightness control as they visualize some of the smallest areas of the anatomy.

Integrated Mini-LED Illumination for Precise Brightness Control

The first-ever integrated mini-LED illumination for single use endoscopy provides surgeons with precise brightness control, enabling them to clearly visualize anatomies that they couldn't before. It features a higher contrast ratio within a smaller local area for extremely small package sizes, providing individual brightness and dim control for multi-spectrum (RGB/IR) devices in surgical procedures.

High Resolution in World's Smallest Camera Module

The OCHTA cable module features OmniVision's CameraCubeChip® wafer-level technology and provides a tiny 0.65 mm x 0.65 mm camera module, with 400 x 400 or 160 KPixel resolution, for high quality image captures. The cable module also features the latest OVMed® cables that are highly flexible and come in a thin micro-coaxial form factor.

OmniVision's OVMed® cable modules are medical-grade, trusted components, undergoing comprehensive certification, qualification and testing, including testing for banned substances, sterilization, biocompatibility, workmanship, operational tests and stress tests. This increases the likelihood and speed of FDA certification for medical device OEMs, while providing hospitals, surgeons and patients with a high level of confidence in the endoscope device.

Find out more at www.ovt.com.

OmniVision®

Applications

- Medical Endoscopes
- Veterinarian Endoscopes
- Dental Equipment
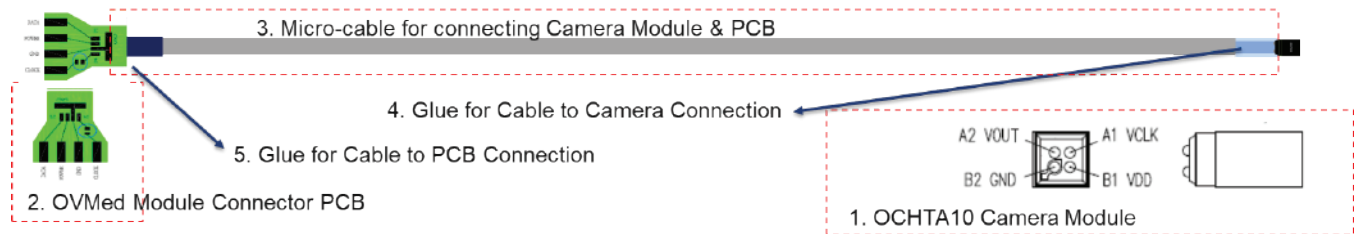- Industrial Endoscopes

Ordering Information

- **OCHTA10-KL1C-0B2E–Z** (color, lead-free) OVMed® cable module with single channel, with no Illumination, connector B, 1.5 m, generation 1

Technical Specifications

- **active array size:** 400 x 400
- **power supply:**
  - analog: 3.3V ±5%
- **temperature range:**
  - **operating:** -20°C to +70°C junction temperature
  - **stable image:** 0°C to +50°C junction temperature
- **output formats:** analog signal output
- **optical size:** 1/31"
- **diagonal field-of-view (FOV):** 120° ±6°
- **f no.:** 2.8
- **focal length:** 0.175 mm
- **maximum exposure:** 876 × Tline
- **scan mode:** progressive
- **frame rate:**
  - **160 Kpixel (400x400):** 30 fps

- **color mosaic:** RGB Bayer pattern
- **pixel size:** 1.008 µm x 1.008 µm
- **image area:** 411.264 µm x 411.264 µm
- **tip x-y dimension:**
  - **maximum x-dimension:** < 0.715 mm
  - **maximum y-dimension:** < 0.715 mm
- **rigid parts z-dimension:**
  - **maximum z-dimension:** < 4 mm
- **cable diameter:** 0.52 ±0.1 mm
- **cable length:** 1500 ±20 mm
- **end connector:** 10.6 mm x 25 mm; 0.1" pitch (4-pin)

Product Features

- optical size of 1/31"
- non-autoclavable
- analog output
- single 3.3V power supply
- on-chip PLL
- serial peripheral interface (SPI)
- exposure and gain control
- pseudo-global shutter (LED mode)
- PureCel®Plus-S pixel structure
- improved sensitivity, FWC, zero blooming, low noise, and low power consumption
- enhanced NIR sensitivity
- square aspect ratio
- minimum package size (total 4 pads)
- 4 m drive distance

Diagram

3. Micro-cable for connecting Camera Module & PCB
4. Glue for Cable to Camera Connection
5. Glue for Cable to PCB Connection
2. OVMed Module Connector PCB
A2 VOUT A1 VCLK
B2 GND B1 VDD
1. OCHTA10 Camera Module

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