



OCHTA Cable Module

400 x 400 product brief



Thin Cable Module for Ultra-Small Single-Use Endoscopes

The OVMed® OCHTA Cable Module is the thinnest medical-grade cable module for single-use endoscopes. The OCHTA Cable Module connects the world's smallest 400 x 400 resolution imager to endoscopes with ultra-thin 0.45 mm cables that are available in 1.5 and 2.5 meter lengths (or up to 4 meters if customized) with the option to add mini-LED illumination. This complete turnkey solution, including the lens and image signal processor, reduces cost and speeds time to market for medical device OEMs.

OMNIVISION's OCHTA Cable Modules feature a six-wire cable that allows manufacturers to add their own LED illumination. Additionally, OMNIVISION offers customizable

cable lengths, connectors and LEDs, providing manufacturers with a fully tested and production-ready solution from a single source. The OCHTA Cable Module includes the world's smallest imager, upgraded from 200 x 200 (previous generation) to 400 x 400 resolution, for improved visibility.

The OCHTA Cable Modules are manufactured in ISO 13485-certified facilities. Additionally, the cables provide the necessary EMC/EMI shielding from the patient as per IEC 60601 requirements.

Find out more at www.ovt.com.



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Ordering Information

- **OCHTA10-KL1C-0A3E-Z** (color, lead-free) OVMed® cable module with single channel, no illumination, connector A, 1.5 m, 6 wires (4 wires for AntLinX™ Analog, 2 wires for LED connection), generation 1
- **OCHTA10-KL1C-0B2E-Z** (color, lead-free) OVMed® cable module with single channel, no illumination, connector B, 1.5 m, 4 wires for AntLinX™ Analog, generation 1
- **OCHTA10-KL1E-0B2E-Z** (color, lead-free) OVMed® cable module with single channel, no illumination, connector B, 2.5 m, 4 wires for AntLinX™ Analog, generation 1

Applications

- medical endoscopes
- dental equipment
- veterinarian endoscopes
- industrial endoscopes

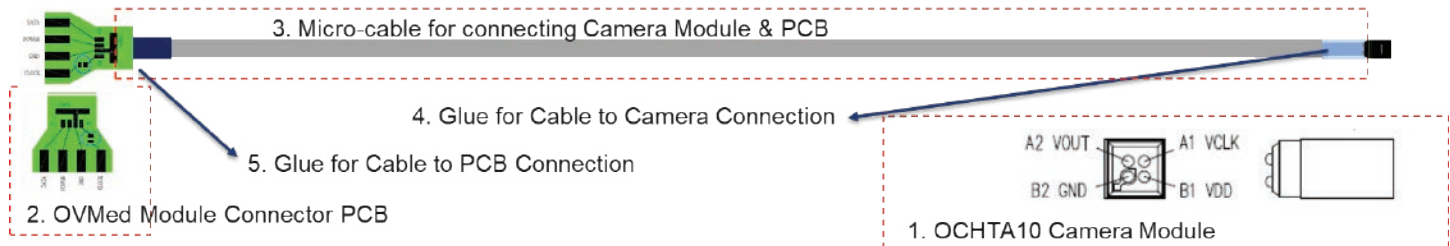
Product Features

- optical size of 1/31"
- non-autoclavable
- AntLinX™ 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
- different lengths of cable and LED configurations are available upon request

Technical Specifications

- **active array size:** 400 x 400
- **pixel size:** 1.008 μm x 1.008 μm
- **power supply:** analog: 3.3V $\pm 5\%$
- **image area:** 411.264 μm x 411.264 μm
- **temperature range:**
 - operating: -20°C to $+70^{\circ}\text{C}$ junction temperature
 - stable image: 0°C to $+50^{\circ}\text{C}$ junction temperature
- **tip x-y dimensions:**
 - maximum x-dimension: < 0.715 mm
 - maximum y-dimension: < 0.715 mm
- **rigid parts z-dimension:** < 4 mm
- **output formats:** analog signal output
- **cable diameter:**
 - KL1C-0A3E: 0.40 ± 0.1 mm
 - KL1C-0B2E: 0.52 ± 0.1 mm
 - KL1E-0B2E: 0.45 ± 0.1 mm
- **optical size:** 1/31"
- **diagonal field of view (FOV):** $120^{\circ} \pm 6^{\circ}$
- **cable length:**
 - KL1C-0A3E: 1500 ± 20 mm
 - KL1C-0B2E: 1500 ± 20 mm
 - KL1E-0B2E: 2500 ± 20 mm
- **f no.:** 2.8
- **focal length:** 0.175 mm
- **maximum exposure:** 876 x Tline
- **end connector PCB:**
 - 6-pin connector A (4 wires for AntLinX™ Analog, 2 wires for LEDs customer can install): 15.6 mm x 25 mm; 0.1" pitch
 - 4-pin connector B (4 wires for AntLinX™ Analog): 10.6 mm x 25 mm; 0.1" pitch
- **scan mode:** progressive
- **frame rate:**
 - 160 Kpixel (400 x 400): 30 fps
- **color mosaic:** RGB Bayer pattern

Functional Block Diagram



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