



#### **application**

The OPCON is an instrument specifically for measurement of suspended particle concentration in the field of hydraulic sediment transport investigations. Together with the OPCON control-unit it enables detailed non-sampling measurements with negligible process disturbances. Depending on the characteristics of the particles the OPCON can also supply data about the size of the particles.

#### **general description**

the measuring method is based on the extinction of near infrared radiation by suspended particles. The OPCON-system consists of:

- the concentration probe with an optical sensor
- a light-source reference circuit and a pre-amplifier

#### **specific applications include**

- hydraulic research
- engineering studies
- industrial processes
- environmental and hydrological measurements

#### **features**

- high spatial resolution
- high rangeability (1:1000)
- near-infrared eliminates influence of ambient light
- integrated pre-amplifier
- wide dynamic partical range (10-1000  $\mu\text{m}$ )
- output available on LCD display as well as output connectors
- sensor can be optimized for specific applications
- the control-unit fits in the standard DELFT HYDRAULICS' UCC and BP-UCC battery powered universal carrying cases.



**specifications**

<p>scale</p>	<p>· China clay ~3g/l                  · sand D<sub>50</sub>= 200 μm ~50g/l                  to obtain reliable measurements an accurate calibration is of decisive importance.                  The calibration medium, liquid and particles, has to be a representative sample of the medium under investigation.</p>
<p>particle size</p>	<p>· 10-1000 μm</p>
<p>repeatability</p>	<p>· 5% of calibration 5 ppm</p>
<p>dynamic response</p>	<p>· 0- 1 kHz</p>
<p><b>probe:</b></p>	
<p>dimensions</p>	<p>see diagramm</p>
<p>sensing volume</p>	<p>2.6 x 2.5 x 30 mm</p>
<p>radiation wave length</p>	<p>peak at 880 nm</p>
<p>radiated power</p>	<p>12 mW</p>
<p>interconnection cable</p>	<p>10 m., standard supplied</p>
<p><b>control-unit</b></p>	
<p>OPCON control</p>	<p>- unit installed in UCC housing.</p>
<p>controls</p>	<p>- zero-adjustment                  - display selector</p>
<p>display</p>	<p>- LCD display (3.5 digits)</p>
<p>outputs</p>	<p>- analog voltage, 0-10 VDC,</p>
<p>connectors</p>	<p>- BNC (2x)                  - 64-pole male DIN 41612 type for UCC</p>
<p><b>(opcon-complete)</b></p>	
<p>power</p>	<p>standard supplied by UCC, -cabinet i.e.:                  total consumption 2 VA max.</p>
<p>dimensions</p>	<p>106 x 129 x 187(205) mm (w x h x d)</p> <p>0.9 kg</p>

