Benefits:

- Real time in-line measurement
- Zero maintenance measurement cells & fiber optics
- Long life LED lamps
- Lamps/wavelength easy to change

The Kemtrak DCP007 is an easy to operate industrial UV-VIS-NIR fiber optic photometer designed to accurately measure the concentration and color of process samples. Measurements are real time and in-line.

The Kemtrak DCP007 uses long life high performance LED lamps and precision fiber optics to provide drift and noise-free measurement with very high precision.

A proprietary dual wavelength four channel measurement technique and advanced digital electronics design allows deep absorbance measurement to 6 AU. A range of shorter optical path-lengths allow for deeper absorbance measurements.

Automatic compensation for sample turbidity and/or fouling of the optical windows ensures trouble-free operation.

Maintenance free measurement cells with sapphire windows have no electronics or moving parts making the unit suitable for hazardous area use.

Standard features include multiple product switching, remote zeroing and signal damping. A graphical internet based interface allows remote operation, calibration, validation and data trending using a standard web browser eliminating the need to install software.

All Kemtrak products are made from the highest quality materials and are designed to the most demanding specifications to ensure long life and the highest reliability.
Housing
Stainless steel EN 1.4001 (X5CrNi18-10), AISI 304 (V2A)
Captive lid screws & external mounting brackets stainless steel
224 x 215 x 105 mm (L x W x D)
IP 65 / EN 60529

Display
1.4 x 4 alphanumeric white on blue dot matrix LCD display
LED background illuminated
Measurement updates every second
LED 1 (green): Power on
LED 2 (red): System fault
LED 3 & 4 (orange): Alarm 1 & Alarm 2
LED 5 (blue): Clean / Hold

Operation
4 push buttons
Remote HTML/Java interface (TCP/IP connection via Ethernet port)

Software Features:
- Auto gain: Fully automatic photometer gain switching
- Auto zero: Automatically, locally or remotely activated zero
- Calibration: 8 Products, Concentration & mA output
- Damping: From 0 to 9999s with noise (air bubble / particle) filter
- Memory: Nonvolatile - all data retained upon power failure
- Security: Alphanumeric password protection

Data Logger
- >23 000 data points (timestamp, average, max. & min.), ring buffer
- Configurable log time interval 1s to 24hr

Event Logger
- >16 000 events, ring buffer
- Timestamp, alarms, zeroing, cleaning, product change, calibration & system events (power, system warning & error messages)

Automatic Cleaning Control
- Automatic cleaning sequence, triggering dedicated relay output
- Manual trigger or external trigger via digital input
- Configurable automatic cleaning interval, 15min to 24hr
- Configurable cleaning duration from 0 to 9999s
- Auto-zero after clean option
- Hold value after clean (to equilibrate) 0 to 9999s

PID Controller
Control method: Pulse width modulated relay output or 0-20mA output
Control period: 2 - 99s
Proportional gain: 0.0000 - 999 999
Integral time: 0.0000 - 999 999s
Derivative time: 0.0000 - 9999s

Remote Input
5 x Digital input (potential free contact) for:
- Input 1-3: Product/range selection
- Input 4: Zero, Instant Zero, Clean or Clean & Zero
- Input 5: Hold (freeze output) or Data log control

Temperature Input (optional)
3-wire Pt100 input
Range: -20 to 200°C (-4 to 392°F)
Resolution: 0.07°C (0.126°F)

Light Source
High performance light emitting diode (LED)
Wavelength range: 255 - 1 550nm
Full Width-Half Maximum (FWHM): 10 nm
Central Wavelength (CWL) Accuracy: ±1nm
Typical lamp lifetime: >100 000 hrs
Note: Measurement wavelengths must be factory installed.
Typical specifications provided for 500nm

Photometric Range
- At 500nm, 10mm OPL: 0.000 - 6 AU
- At 1AU: 25°C, 500nm: ±0.001 AU
- At 2AU: ±0.005 AU

Photometric Noise
- At 1AU: 25°C, 500nm: ±0.001 AU

Linearity
± 0.5% of respective measuring range

mA Output
1 x selectable 0 - 20 mA / 4 - 20 mA (NAMUR, max 21.6mA)
Optional second mA output

Fail-Safe:
Dedicated relay output, 1A 240 VAC
mA output value used to signal a system fault (NAMUR <3.6mA or >21.0mA)

Network Interface (remote communications):
TCP/IP, 10Base-T and 100Base-TX Link
HTML/Java interface using native protocol over TCP/IP
Connector: RJ45
Software: Web browser with Java version 6 or later

Operating Conditions
- Ambient temperature: 0°C to +50°C (32°F to 122°F)
- Transport: -20°C to +70°C (-4°F to 158°F)
- Power Supply: 100 - 240V AC, 50-60Hz, 1A
- Mains fuse: 1A (type HST), Max breaking capacity 35A
- Power Consumption: 25 VA (max.)

Certificates
ISO 9001:2000, CE, ATEX Exd IIB + H2 T6 IP66 Category II 2 G (option)

Manifolds
Standard designs include DIN Range (DIN EN 1092-1, ANSI / ANSI B 16.5 and BS3293), Tri-Clamp® (ISO 2852 & DIN 32676), Straight pipe thread (DIN ISO 228 BSP), NPT tapered pipe thread. Line size up to DN100.

Materials
Standard material stainless steel 316L (EN 1.4435 or EN 1.4404)
Other materials include Titanium Gr 2, Hastelloy C-276 & C-22, Monel 400, PTFE C25 (Fluorocarbon), PVDF (Kynar) and others

Window
Sapphire, UV Fused silica

Light Source
Type: LED
Wavelength range: 255 - 1 550nm
Grounding: Galvanically isolated, tested during final inspection to 500 VDC

Fail-Safe:
Dedicated relay output, 1A 240 VAC
mA output value used to signal a system fault (NAMUR <3.6mA or >21.0mA)

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Kemtrak is a leading manufacturer of fiber optic measuring and automation products for the process engineering industry. The Company provides tailor made solutions to meet the needs of a wide range of industries including chemical, petrochemical & offshore, pharmaceutical, food & beverage, pulp and paper and water & environment. With its headquarters in Stockholm Sweden, Kemtrak has trained representatives and support personnel globally. The main manufacturing facility in Gothenburg, Sweden is certified according to ISO 9001:2000.