

## PYROSPOT DPE 10MC and DT 40LC

Spezial pyrometer for CO<sub>2</sub> Temperature measurement



- Digital Pyrometers for 500 °C to 2000 °C
- Special spectral range
- RS 485 or USB interface
- Through-lens sighting
- 2-wire model for good value

The new digital Pyrometers PYROSPOT DPE 10MC and PYROSPOT DT 40LC are special devices for temperature measurement CO<sub>2</sub>-containing flames and combustion gases. The narrow spectral range is within the absorption band of hot CO<sub>2</sub>.

The solid construction in form of a compact housing allows usage even under rough environmental conditions.

With an adjustable response time these Pyrometers can be set to the appropriate measuring conditions.

The universal optics is suitable for using the devices in different applications.

The integrated through-lens sighting of PYROSPOT DPE 10M enables to focus the measuring object comfortably and exactly.

The temperature linear standard output signal of 0/4 to 20 mA allows easy implementation in existing measuring and controlling systems.

The DPE 10MC comes with galvanically isolated RS485-interface which allows connection to bus systems. The DT 40LC is equipped with USB interface for parameterizing and data evaluation.

All parameters can be easily adjusted to the application by using the comfortable parameterizing and evaluation software PYROSOFT Spot.

Typical applications:

- Measurement of flame temperature
- Measurement of combustion gases
- Combustion chamber

## Technical data and accessories

Technical data		
Type	DPE 10MC	DT 40LC
Temperature ranges	500 °C to 2000 °C	500°C to 1800 °C
Subranges	adjustable within standard range, minimum span 50 °C	
Spectral range	4,5 µm (absorption band for hot CO <sub>2</sub> )	
Optics	Vario optics	fixed optics
Distance ratio	refer table	50 : 1
Uncertainty <sup>2</sup>	0,5 % of meas. value + 1 K	1 % of meas. value + 1 K
Reproducibility <sup>2</sup>	0,2 % of meas. value + 1 K	0,5 % of meas. value + 1 K
NETD <sup>1,2</sup>	0,2 °C	0,2 °C
Response time (t95)	500 ms, adjustable from 1,5 ms to 10 s	500 ms, adjustable from 60 ms to 10 s
Emissivity	0,100 to 1,000	0,200 to 1,000
Storage	Maximum value storage, adjustable via interface	
Output	0/4 to 20 mA, adjustable via interface, temperature linear, max. burden: 500 Ω	4 to 20 mA, temperature linear, max. burden: 700 Ω at 24 V
Interface	RS485, galvanically isolated, half duplex, 115 kBd	USB, galvanically isolated
Aiming	Through lens sighting	none
Software	PYROSOFT Spot for Windows®	
Parameter	Emissivity, response time, unit °C or °F, storage, subrange, adjustable via interface and Software	
Operating elements	Emissivity correction, display	none
Power supply	24 V DC ± 25 %	24 V DC ± 25 %
Power consumption	max. 6 W	max. 0,6 W
Operating temperature	0 °C to 55 °C	0°C to 70°C
Storage temperature	-20 °C to 70 °C	-20°C to 70°C
Weight	approx. 520 g	approx. 395 g
Dimensions	54 × 54 mm, length 170 mm	Thread M40 x 1,5, length 125 mm
Housing	Compact housing with plug connector, display and buttons	Stainless steel with plug connector
Safety class	IP 65 (according to DIN 40 050)	
CE-symbol	according to EU regulations (EN 50 011)	
Lieferumfang	PYROSPOT DPE 10MC or DT 40LC, Manual, Inspection sheet, PYROSOFT Spot for Windows® (without connection cable, please order separately)	

<sup>1</sup> Noise equivalent temperature difference, <sup>2</sup>T<sub>u</sub> = 23 °C, ε = 1, t<sub>95</sub> = 1 s

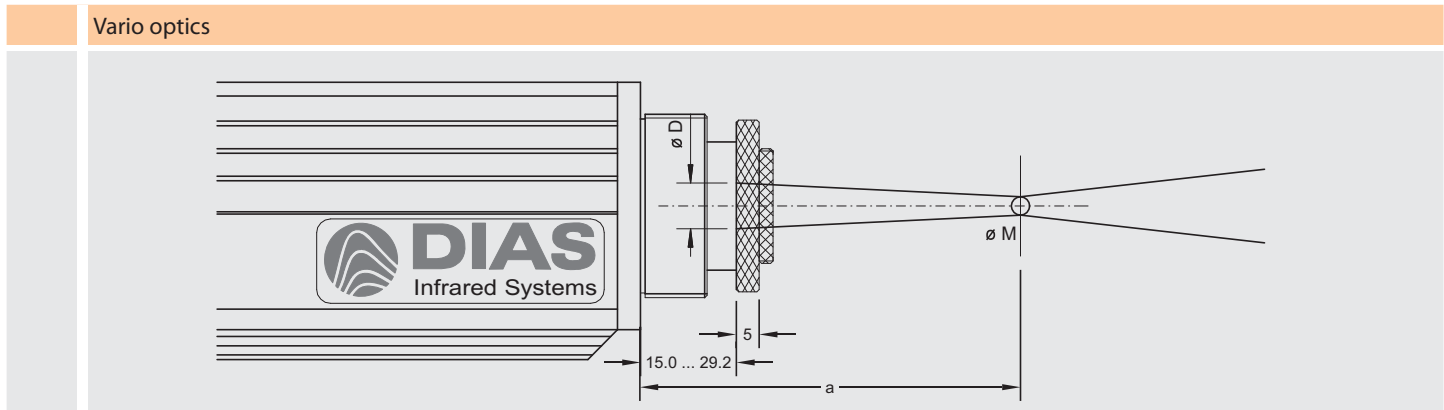
Accessories <sup>1</sup>	
Connection cables	Length 2 m, 5 m, 10 m, 15 m, 20 m, 25 m or 30 m
Interface	RS485 to USB
Power supply	24 V DC, 1 A
Mounting support	adjustable, stainless steel
Ball and socket mounting	adjustable, stainless steel
Air purge	Stainless steel
Cooling plate	with air purge
Cooling jacket	Stainless steel, heavy duty
Protection housing	incl. air purge

<sup>1</sup> Other on request.

Contact: [info@dias-infrared.de](mailto:info@dias-infrared.de)

## Optics DPE 10MC

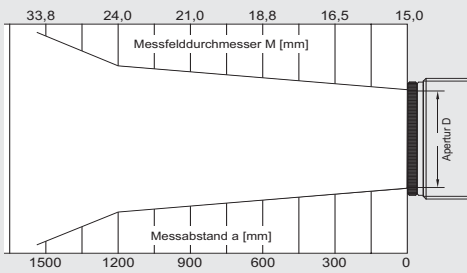
Vario optics	I	II	III
Distance a in mm	130 ... 170	230 ... 450	400 ... 4500
Spot size M in mm	1,2 ... 1,7	1,5 ... 2,8	4 ... 60
Aperture D in mm	11,6	11,6	11,6



Display	Rear view
<ul style="list-style-type: none"> <li>- Display current temperature</li> <li>- Display emissivity</li> </ul>	<ul style="list-style-type: none"> <li>- Through-lens sighting</li> <li>- Plug connector and interface</li> <li>- Buttons for emissivity settings</li> </ul>
	

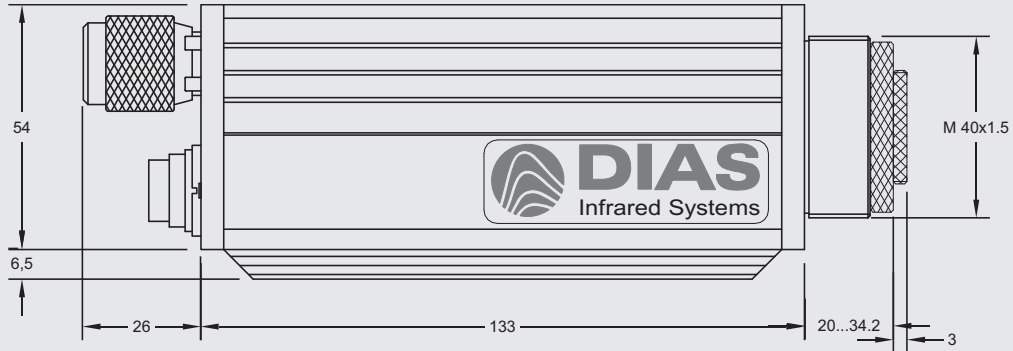
## Optics DT 40LC

Optics 1200 mm							
Distance a in mm	0	100	300	600	900	1200	1500
Spot size M in mm							
DT 40LC (500 °C to 1800 °C)	15	15,0	16,5	18,8	21,0	24,0	33,8

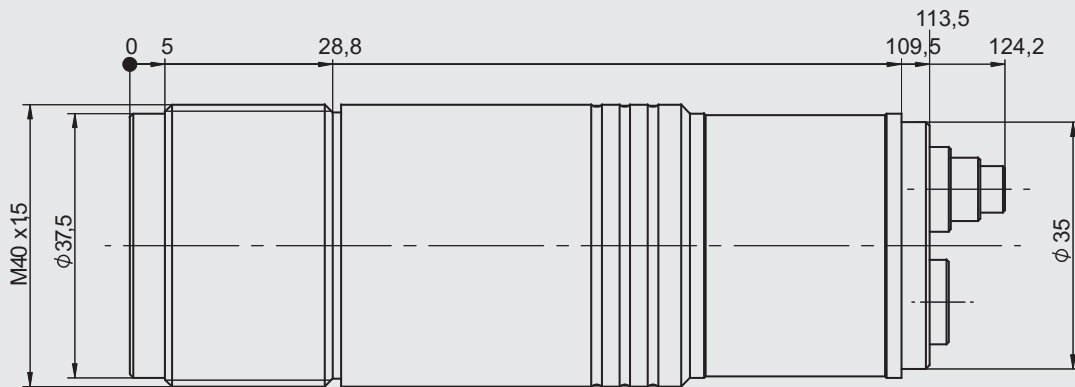


## Dimension and accessories

Dimension PYROSPOT DPE 10MC



Dimension PYROSPOT DT 40LC



### Accessories

Cooling jacket for DPE 10MC



Air purge



Cooling jacket for DT 40LC



Mounting



Technical specifications are subject to be changed without notices. 10/2011.

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