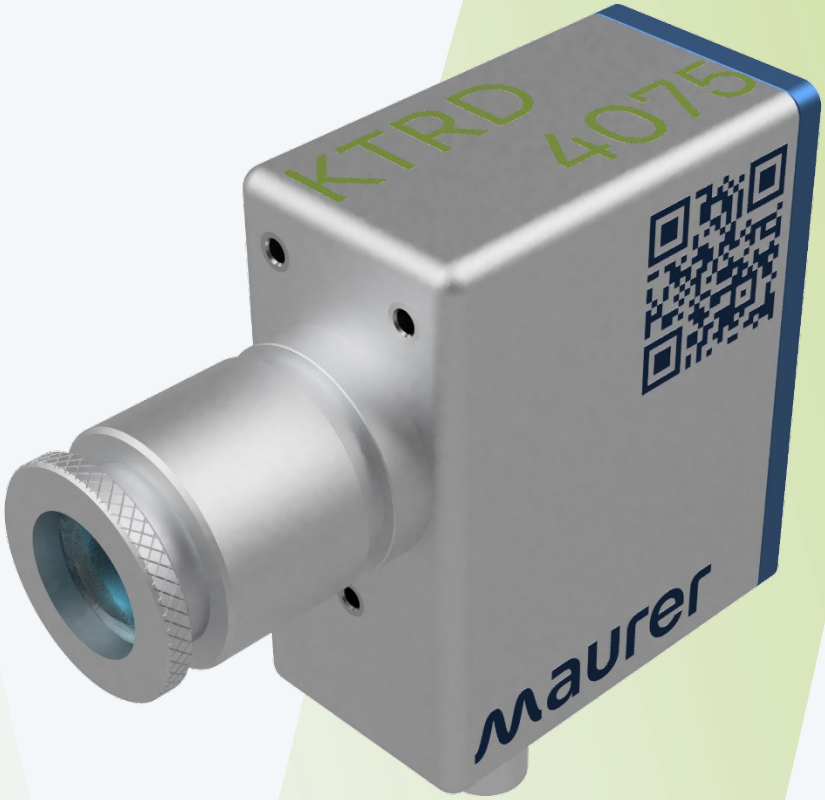
Technical Datasheet

KTRD 4075



Maximum Performance
Minimum Space

- Compact device
- 300–1500 °C
- 100–5000 mm focus
- Easy integration

maurer optoelectronics

GRUBATEC MESS- UND REGELTECHNIK

GRUBATEC AG
Gewerbehaus Ergolz, Wölferstrasse 5, 4414 Füllinsdorf
Tel.: +41 (0)55 617 00 80 | www.grubatec.ch | sales@grubatec.ch

Compact Pyrometer

For decades, MAURER has been delivering precise, reliable and adaptable infrared measurement technology. The KTRD 40xx series are compact MAURER pyrometers in a miniature housing for temperatures from 100 to 3000 °C. The continuously adjustable vario optics, from 100 to 5000 mm measuring distance, and three selectable spectral ranges make for quick integration into existing systems.

Steel | Iron | Non-ferrous metals | Wire | Ceramics | Rolling | Induction | Soldering | Welding | Forming | Vacuum furnaces

Big on performance, small in size

- Extremely compact housing (30 x 65 x 80 mm) for minimal space requirements
- Vario optics continuously adjustable from 100 to 5000 mm measuring distance
- Three spectral ranges selectable for different materials and temperature windows
- Fully compatible with the accessories and software of the universal device series

Models KTRD 4065 | **KTRD 4075** | KTRD 4085

Compact technology with full performance

- Spectral range: 1.45 - 1.7 µm
- Short response time of 1 ms
- Emissivity of 100 - 10 %, adjustable directly on the device or via interface
- LED target light, precisely matching actual measurement spot in size & position
- With vario optics, adjustable from 100 - 5000 mm, for exact focusing on the measurement point
- Usable with digital and analog output
- 1 switching output (open collector)
- Operating voltage 24 V DC
- Free software (IR-LOG) for parameterization, data recording and archiving

Typical Application

When forging steel parts, the KTRD 4075 monitors the workpiece temperature directly at the anvil: the blacksmith immediately sees whether the part is still within the optimal forming range, avoiding scrap from overheating or underheating.

Measurement ranges

1. 300 - 800 °C
2. 350 - 900 °C
3. 400 - 1000 °C
4. 500 - 1200 °C
5. 300 - 1300 °C
6. 400 - 1500 °C

Special ranges on request

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Technical Data

Device types	KTRD 4075
Measurement spot marking	**LED target light**
Response time	1 ms
Spectral range	1,45 - 1,7 µm
Measurement uncertainty	0,5 % ± 1 °C (ε = 1, Tu = 23 °C, T95 = 1 s)
Temperature dependance	0,01 % / °C
Reproducibility	0,1 %
Emissivity	100 - 10 % adjustable on the device or via interface
Resolution	< 0.1 % at the analog output < 0.1 °C at the interface
Analog output	0 - 20 mA or 4 - 20 mA (max. load 500 Ω) adjustable via interface or software
Switching output	24 V / 100 mA (open coll.)
Interface	RS 232 ± 50 V isolated
Device connector	8-pin connector
Operating temperature	0 - 60 °C
Storage temperature	-10 °C - 70 °C
Permissible humidity	35 - 85 % RH (no condensation)
Supply voltage	24 V DC ± 10 %
Power consumption	< 100 mA
Dimensions (WxHxD) / Weight	30 x 65 x 80 mm / 0.19 kg
IP code	IP65
Others	Max. memory, dual memory, adjustable time and threshold value, reset after time, external contact, via software, on new measured object



Additional options

- Interfaces: RS 485 ± 70 V isolated (7-pin connector)
- High-speed version: KTRD 4075-HS
- Version with fiber optic cable: KTRD 4475
- Special optics and measuring ranges available on request

Electrical add-ons

- Evaluation unit AED 1012
- PC box (USB connection set)
- Various connection cables

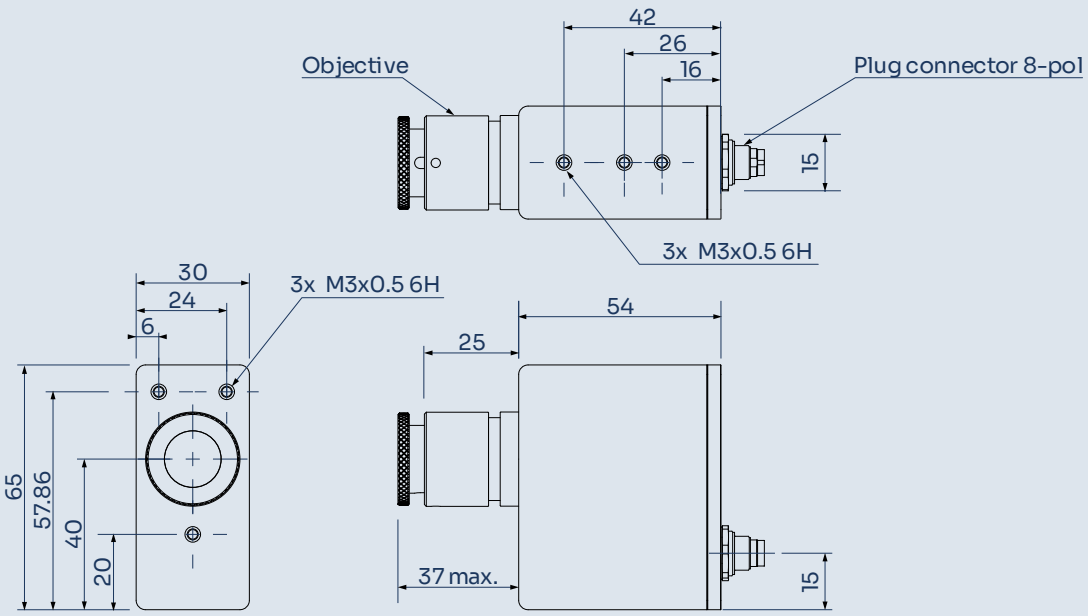
Mechanical add-ons

- Mounting bracket
- 90° beam deflector
- Air-purge attachment
- Cooling plate

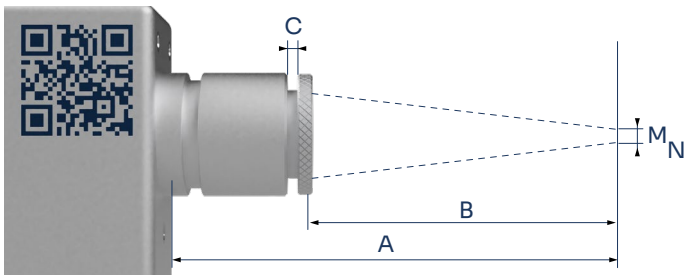
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Drawings

KTRD4xx housing with target light



Optics



Legend	
A	Optic extraction
B	Distance from housing
C	Distance from optics
Mn	Nominal spot size

Measurement ranges &Effective spot size		
1	300 - 800 °C	Me = Mn x 8,5
2	350 - 900 °C	Me = Mn x 8,5
3	400 - 1000 °C	Me = Mn x 8,5
4	500 - 1200 °C	Me = Mn x 8,5
5	300 - 1300 °C	Me = Mn x 8,5
6	400 - 1500 °C	Me = Mn x 8,5

Optic: A25-15-7

A [mm]	B [mm]	C [mm]	Mn [mm]
141	100	13	1
241	200	12,7	2
341	300	12,5	3
440	400	12,2	4
540	500	11,9	5
640	600	11,7	6
739	700	11,4	7
839	800	11,1	8
939	900	10,9	9
1039	1000	10,6	10
2036	2000	8	20
3033	3000	5,3	30
4031	4000	2,7	40
5028	5000	0	50

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