DIAS Infrared Systems

Digital Pyrometers **PYROSPOT**

Non-contact Temperature Measurement

–40 °C to 3000 °C

PYROSPOT Series

Digital pyrometers for non-contact temperature measurement

Our **PYROSPOT** series digital pyrometers are **radiation thermometers** that provide non-contact temperature measurement from **–40 °C to 3000 °C**. They are characterized by their robust design, excellent accuracy and high reliability. They are particularly suitable for use in industrial environments.

Extensive accessories allow the pyrometers to be individually adapted to the application or integrated into system solutions. For configuration of the pyrometers and analysis of the measured values the Windows® software **PYROSOFT Spot** is available.

We offer a **very wide range of pyrometers** with an **excellent price/performance ratio**. Therefore you will find the right product for your application.

For measurements on objects with variable or unknown emissivity, our **ratio pyrometers**, which are included in many PYROSPOT series, are also suitable. Our **pyrometers with fiber optics** are particularly suitable for measurements in hot ambient conditions or hard-to-reach measuring points.

All fixed pyrometers have a **temperature linear 0/4 to 20 mA output**. **USB** or **RS-485** are available as **digital, galvanically isolated interfaces**. The RS-485 interface uses the **Modbus RTU** data protocol. The pyrometers equipped with this interface can be easily integrated into existing bus systems and process controls. Integration into local networks is possible with our pyrometers with **Ethernet interface** or the **Ethernet interface box DCU^{IoP}**.

••• Find the right device for every material and measuring temperature range

Material	Measuring temperature range	Spectral range	Device designation
Nonmetals	–40 °C to 1000 °C	8 µm to 14 µm	"L"
Ultrathin glass	300 °C to 1100 °C	around 7.7 µm	"U"
Glass surfaces	50 °C to 2500 °C	around 5.0 µm	"G"
Hot CO_2	500 °C to 2000 °C	around 4.5 µm/4.6 µm	"C"
Measurement through flames	100 °C to 2500 °C	around 3.9 µm	"F"
Semidconductors, metals	50 °C to 1800 °C	3.5 µm to 4.0 µm	"MF"
Thin plastic films	50 °C to 400 °C	around 3.43 µm	"P"
Ceramics, metals	20 °C to 1000 °C	3 µm to 5 µm	"M"
Metals, ceramics	50 °C to 2200 °C	2.0 µm to 2.8 µm	"N"
Metals, ceramics, graphite	200 °C to 2500 °C	1.5 µm to 1.8 µm	"N"
Tungsten	500 °C to 2500 °C	around 1.25 µm	"NT"
Silicon, metals	400 °C to 2500 °C	around 0.88 µm	"N"
Metals, glass melts	500 °C to 3000 °C	0.8 µm to 1.1 µm	"N"
Liquid metals	1000 °C to 2500 °C	around 0.55 µm	"N"

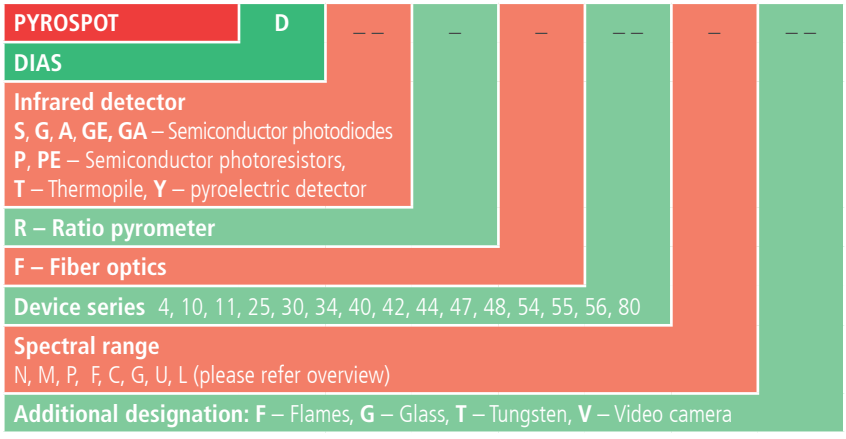
"To minimize physically caused temperature measurement errors due to emissivity inaccuracies, you should measure at the shortest possible wavelength. Furthermore, spectral ranges should be used in which the measured object has a particularly high emissivity and the environment causes low interference. In the overview you can see typical spectral ranges, recommended temperature ranges and example applications".

Daniel Wagner, sales engineer and pyrometer specialist at DIAS Infrared GmbH

••• What does the device designation mean?

Our pyrometers are labeled according to a special scheme that helps you identify the IR sensor type, instrument series, spectral range, and some special features.

For example: PYROSPOT DA 10GV
Pyrometer with semiconductor photodiode infrared sensor of series 10, sectral range "G" and video module



DIAS Infrared Systems

Our PYROSPOT series at a glance

Features	Interface				Output			Aiming/Target					Optics				Housing				
PYROSPOT Series	RS-485	Ethernet	USB	Parameterization interface	4 ... 20 mA	0/4 ... 20 mA	Switching output	Laser	Laser aiming light adapter	LED	Video	Through-lens sighting	Fixed optics	Vario optics	Vario optics motorfocus	Fiber optics	Stainless steel round housing IP65	Aluminum compact housing IP65	Seperate electronics box	Display and user controls	Portable
Series **4x**	Universal, compact and robust pyrometer for industrial application																				
Series 40			✓		✓			✓	✓	✓			✓	✓		✓	✓				
Series 42					✓			✓	✓				✓				✓			✓	
Series 44	✓					✓		✓	✓	✓			✓	✓		✓	✓				
Series 47		✓				✓		✓	✓	✓			✓	✓		✓	✓				
Series 48[1]							✓			✓			✓				✓			✓	
Series **5x**	High-precision and fast pyrometers for industrial application																				
Series 54	✓					✓	✓	✓			✓	✓	✓				✓				
Series 55	✓					✓	✓	✓			✓	✓	✓		✓		✓			✓	
Series 56	✓					✓	✓	✓			✓	✓	✓				✓			✓	
Series **1x**	Highly accurate pyrometers for industry and research																				
Series 10	✓					✓	✓	✓		✓	✓	✓		✓				✓		✓	
Series 11	✓					✓	✓	✓					✓	✓		✓			✓	✓	
More																					
Series 4	✓					✓	✓						✓						✓	✓	
Series 25				✓	✓				✓				✓				✓				
Series 30			✓		✓								✓			✓			✓	✓	
Series 34	✓					✓							✓			✓			✓	✓	
Series 80			✓					✓			✓			✓						✓	✓

Each series of our PYROSPOT range is characterized by a variety of technical features. The matrix gives you a quick overview of the most important main features.

Different housing shapes allow you to optimally adapt to the environmental conditions prevailing on site.

Housing variants

	Round housings			Compact housing	Separate electronics box	Portable
						
Series	25	40, 42, 44, 47, 48	54, 55, 56	10	4, 11, 30[2], 34[2]	80
Dimensions	M25×1, length 98 mm	M40×1.5, length 125 mm	∅ 50 mm, length 105-140 mm	54 × 54 × 170 mm³ (H × W × L)	80 × 110 × 40 mm³ (H × W × D)	230 × 135 × 85 mm³ (H × W × L)
Material	Stainless steel (IP65)	Stainless steel (IP65)	Stainless steel (IP65)	Aluminum (IP65)	Aluminum, stainless steel (IP65)	Aluminium, plastics (IP50)

[1] PYROSWITCH Series 48. [2] Without display and user controls

PYROSPOT Series 4x

Universal, compact and robust pyrometers for industrial application

Series **40 – All-around applicable 2-wire pyrometers with USB interface**

- Different fixed and vario optics with very small target sizes from 0.7 mm
- Laser or LED aiming light
- Pyrometer with fiber optics available
- Compact stainless steel housing IP65

Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DS 40N	0.8 µm to 1.1 µm	600 °C to 2500 °C	100 : 1 to 200 : 1	10 ms	USB	Laser or LED aiming light
DG 40N	1.5 µm to 1.8 µm	250 °C to 2000 °C	100 : 1 to 200 : 1	10 ms	USB	Laser or LED aiming light
DT 40F	around 3.9 µm	300 °C to 2500 °C	50 : 1	60 ms	USB	Laser aiming light adapter or LED aiming light
DT 40C	around 4.5 µm	500 °C to 1800 °C	50 : 1	60 ms	USB	None
DT 40G	around 5.0 µm	100 °C to 2500 °C	50 : 1	60 ms	USB	Laser aiming light adapter or LED aiming light
DT 40U	around 7.7 µm	300 °C to 1100 °C	50 : 1	60 ms	USB	None
DT 40L	8 µm to 14 µm	–40 °C to 1000 °C	50 : 1	60 ms	USB	Laser aiming light adapter or LED aiming light
Pyrometers with fiber optics						
DSF 40N	0.8 µm to 1.1 µm	600 °C to 2500 °C	50 : 1 to 150 : 1	10 ms	USB	Laser or LED aiming light
DGF 40N	1.5 µm to 1.8 µm	250 °C to 2000 °C	50 : 1 to 150 : 1	10 ms	USB	Laser or LED aiming light

Series **42 – 2-wire beginner series with emissivity adjustment**

- Different fixed optics available
- Very good price-performance ratio
- Stainless steel housing IP65
- Extensive accessories, for example Cooling jacket, air purge unit

Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DS 42N	0.8 µm to 1.1 µm	600 °C to 2500 °C	100 : 1 to 200 : 1	10 ms	none	Laser aiming light
DG 42N	1.5 µm to 1.8 µm	250 °C to 1800 °C	100 : 1 to 200 : 1	10 ms	none	Laser aiming light
DT 42G	around 5.0 µm	100 °C to 2500 °C	50 : 1	100 ms	none	Laser-aiming light adapter
DT 42L	8 µm to 14 µm	–40 °C to 1000 °C	50 : 1	100 ms	none	Laser-aiming light adapter

Series **48 – Fast temperature switch with potential-free output**

- Very short switch times of only 1 ms
- Different fixed optics
- Protection class IP65
- Adjustable switching threshold

Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DG 48N	1.5 µm to 1.8 µm	200 °C to 1800 °C	45 : 1 to 200 : 1	1 ms	none	LED aiming light

Series **44 – Bus-compatible pyrometers with RS-485 interface**

- Different fixed and vario optics with very small target sizes from 0.7 mm
- Ratio pyrometers and devices with fiber optics
- Robust stainless steel housing IP65

Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DS 44N	0.8 µm to 1.1 µm	600 °C to 2500 °C	100 : 1 to 200 : 1	5 ms	RS-485	Laser or LED aiming light
DG 44N	1.5 µm to 1.8 µm	250 °C to 2000 °C	100 : 1 to 200 : 1	5 ms	RS-485	Laser or LED aiming light
DGE 44N	2.0 µm to 2.6 µm	75 °C to 1200 °C	80 : 1 to 200 : 1	5 ms	RS-485	Laser aiming light
DA 44M	3.0 µm to 5.0 µm	20 °C to 1000 °C	50 : 1	5 ms	RS-485	Laser aiming light adapter or LED aiming light
DA 44MF	3.5 µm to 4.0 µm	50 °C to 1000 °C	50 : 1	5 ms	RS-485	Laser aiming light adapter or LED aiming light
DA 44F	around 3.9 µm	100 °C to 2500 °C	50 : 1	5 ms	RS-485	Laser aiming light adapter or LED aiming light
DA 44G	around 5.0 µm	50 °C to 2500 °C	50 : 1	5 ms	RS-485	Laser aiming light adapter or LED aiming light
DT 44L	8 µm to 14 µm	–40 °C to 1000 °C	50 : 1	10 ms[1)]	RS-485	Laser aiming light adapter or LED aiming light
Ratio pyrometers						
DSR 44N	0.7 µm to 1.1 µm	600 °C to 2500 °C	50 : 1 to 200 : 1	5 ms	RS-485	Laser aiming light
Pyrometers with fiber optics						
DSF 44N	0.8 µm to 1.1 µm	600 °C to 2500 °C	50 : 1 to 150 : 1	5 ms	RS-485	Laser or LED aiming light
DGF 44N	1.5 µm to 1.8 µm	250 °C to 2000 °C	50 : 1 to 150 : 1	5 ms	RS-485	Laser or LED aiming light
Ratio pyrometers with fiber optics						
DSRF 44N	0.7 µm to 1.1 µm	700 °C to 1800 °C	40 : 1	5 ms	RS-485	Laser aiming light

[1)] t_{90}

Series **47 – Pyrometers with Ethernet interface**

- Compact pyrometers with Ethernet interface
- Integrated web server, Modbus-TCP protocol
- Robust stainless steel housing IP65

Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DS 47N	0.8 µm to 1.1 µm	600 °C to 2500 °C	100 : 1 to 200 : 1	5 ms	Ethernet	Laser or LED aiming light
DG 47N	1.5 µm to 1.8 µm	250 °C to 2000 °C	100 : 1 to 200 : 1	5 ms	Ethernet	Laser or LED aiming light
DA 47M	3.0 µm to 5.0 µm	20 °C to 1000 °C	50 : 1	5 ms	Ethernet	Laser aiming light adapter or LED aiming light
DA 47MF	3.5 µm to 4.0 µm	50 °C to 1000 °C	50 : 1	5 ms	Ethernet	Laser aiming light adapter or LED aiming light
DA 47F	around 3.9 µm	100 °C to 2500 °C	50 : 1	5 ms	Ethernet	Laser aiming light adapter or LED aiming light
DA 47G	around 5.0 µm	50 °C to 2500 °C	50 : 1	5 ms	Ethernet	Laser aiming light adapter or LED aiming light
DT 47L	8 µm to 14 µm	–40 °C to 1000 °C	50 : 1	10 ms[1)]	Ethernet	Laser aiming light adapter or LED aiming light
Pyrometers with fiber optics						
DSF 47N	0.8 µm to 1.1 µm	600 °C to 2500 °C	50 : 1 to 150 : 1	5 ms	Ethernet	Laser or LED aiming light
DGF 47N	1.5 µm to 1.8 µm	250 °C to 2000 °C	50 : 1 to 150 : 1	5 ms	Ethernet	Laser or LED aiming light

[1)] t_{90}

PYROSPOT Series 5x

High-precision, very fast pyrometers for operations in industry

Series **54 – Compact pyrometers with very good price-performance ratio**

- Parameterization via RS-485 interface
- Laser aiming light, color video camera or through-lens sighting
- Special pyrometers for measurement in combustion chambers
- Robust stainless steel housing IP65

Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DS 54N	0.8 µm to 1.1 µm	550 °C to 3000 °C	200 : 1 to 300 : 1	2 ms	RS-485	Laser, video, through-lens sighting
DG 54N	1.5 µm to 1.8 µm	200 °C to 2500 °C	200 : 1 to 300 : 1	2 ms	RS-485	Laser, video, through-lens sighting
Ratio pyrometers						
DSR 54N	0.7 µm to 1.1 µm	500 °C to 3000 °C	50 : 1 to 300 : 1	5 ms	RS-485	Laser, video, through-lens sighting
Special pyrometer for combustion chambers						
DSR 54NF	0.7 µm to 1.1 µm	700 °C to 2500 °C	200 : 1	5 ms	RS-485	Laser, video

Series **55 – Easy to operate pyrometers with fixed optics or motorfocus vario optics**

- Different fixed optics or vario optics with motorfocus (adjustable in 8 steps, no external moving parts)
- Display and keys for emissivity/ motorfocus

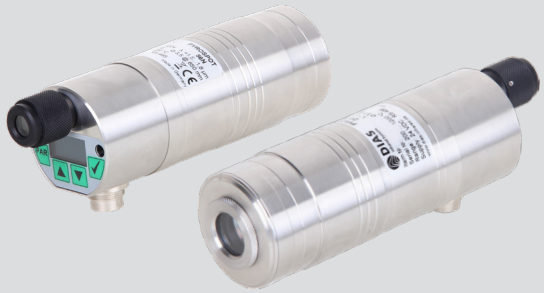
Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DS 55N	0.8 µm to 1.1 µm	550 °C to 3000 °C	160 : 1 to 300 : 1	2 ms	RS-485	Laser, video, through-lens sighting
DG 55N	1.5 µm to 1.8 µm	200 °C to 2500 °C	160 : 1 to 300 : 1	2 ms	RS-485	Laser, video, through-lens sighting
DGE 55N	2.0 µm to 2.6 µm	75 °C to 2200 °C	80 : 1 to 200 : 1	2 ms	RS-485	Laser, through-lens sighting
Ratio pyrometers						
DSR 55N	0.7 µm to 1.1 µm	500 °C to 3000 °C	40 : 1 to 300 : 1	5 ms	RS-485	Laser, video, through-lens sighting

••• Examples for mechanical accessories

Series 54/55 with air purge unit and adjustable mounting angle

Series 54/55 with cooling jacket including air purge, sleeve for ball flange and ball flange

Series **56 – Powerful pyrometers with display and parameterization keys**



- Different fixed optics with very small target size from 0.7 mm
- Laser aiming light, color video camera or through-lens sighting
- Stainless steel housing IP65

Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DS 56N	0.8 µm to 1.1 µm	550 °C to 3000 °C	200 : 1 to 300 : 1	2 ms	RS-485	Laser, video, through-lens sighting
DG 56N	1.5 µm to 1.8 µm	200 °C to 2500 °C	200 : 1 to 300 : 1	2 ms	RS-485	Laser, video, through-lens sighting
DGE 56N	2.0 µm to 2.6 µm	75 °C to 2200 °C	80 : 1 to 200 : 1	2 ms	RS-485	Laser, through-lens sighting
Ratio pyrometers						
DSR 56N	0.7 µm to 1.1 µm	500 °C to 3000 °C	50 : 1 to 300 : 1	5 ms	RS-485	Laser, video, through-lens sighting

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PYROSPOT Serien 1x

High-precision pyrometers for industry and research

Series **10 – Fast pyrometers with display, parameterization keys and vario optics**

- Different vario optics with very small target sizes from 0.7 mm
- Integrated display for showing measured values and parameters
- Keys for parameterization
- A lot of different aiming aids

Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DS 10N	0.8 µm to 1.1 µm	550 °C to 3000 °C	200 : 1 to 300 : 1	2 ms	RS-485	Each pyrometer is equipped with a LED or laser aiming light, a through-lens sighting or a color video camera
DGA 10N	around 0.88 µm	400 °C to 2500 °C	50 : 1 to 200 : 1	2 ms	RS-485	
DG 10NT	around 1.25 µm	500 °C to 2500 °C	200 : 1	2 ms	RS-485	
DG 10N	1.5 µm to 1.8 µm	200 °C to 2500 °C	200 : 1 to 300 : 1	2 ms	RS-485	
DGE 10N	2.0 µm to 2.6 µm	100 °C to 1200 °C	100 : 1 to 200 : 1	2 ms	RS-485	
DP 10N	2.0 µm to 2.8 µm	50 °C to 1200 °C	100 : 1 to 200 : 1	1,5 ms	RS-485	
DA 10M	3 µm to 5.0 µm	30°C to 1400 °C	100 : 1 to 130 : 1	1 ms	RS-485	
DPE 10M	3.0 µm to 5.0 µm	20 °C to 1000 °C	75 : 1 to 150 : 1	1,5 ms	RS-485	
DA 10MF	3.5 µm to 4.0 µm	75 °C to 1800 °C	100 : 1 to 130 : 1	1 ms	RS-485	
DPE 10MF	3.5 µm to 4.0 µm	50 °C to 2500 °C	75 : 1 to 200 : 1	1,5 ms	RS-485	
DA 10F	around 3.9 µm	200 °C to 2500 °C	100 : 1 to 130 : 1	1 ms	RS-485	
DA 10C	around 4.6 µm	500 °C to 2000 °C	100 : 1	1 ms	RS-485	Through-lens sighting
DA 10G	around 5.0 µm	75 °C to 2500 °C	100 : 1 to 130 : 1	1 ms	RS-485	Each pyrometer is equipped with a LED or laser aiming light, a through-lens sighting or a color video camera
DY 10L	8 µm to 14 µm	0 °C to 1000 °C	80 : 1 to 100 : 1	30 ms	RS-485	
Ratio pyrometers						
DSR 10N	0.7 µm to 1.1 µm	500 °C to 3000 °C	50 : 1 to 300 : 1	5 ms	RS-485	Each pyrometer is equipped with a LED or laser aiming light, a through-lens sighting or a color video camera
DSR 10NF	0.7 µm to 1.1 µm	600 °C to 2500 °C	100 : 1 to 300 : 1	5 ms	RS-485	
DGR 10N	1.5 µm to 1.9 µm	300 °C to 2300 °C	100 : 1 to 300 : 1	5 ms	RS-485	

PYROSPOT Series 1x

High-precision pyrometers for industry and research

Series **11 – Robust pyrometers with fiber optics, display and keys**

- Vario and fixed optics available with very small target sizes from 0.7 mm
- For environmental conditions up to 250 °C
- OLED display and keys for parameterization
- Protection class IP65

Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DSF 11N	0.8 µm to 1.1 µm	600 °C to 3000 °C	100 : 1 to 150 : 1	2 ms	RS-485	Laser aiming light
DGAF 11N	around 0.88 µm	350 °C to 2500 °C	15: 1 to 150 : 1	2 ms	RS-485	Laser aiming light
DGF 11N	1.5 µm to 1.8 µm	250 °C to 2500 °C	100 : 1 to 150 : 1	2 ms	RS-485	Laser aiming light
DGEF 11N	1.5 µm to 2.2 µm	100 °C to 800 °C	20 : 1 to 30 :1	2 ms	RS-485	Laser aiming light
DGEF 11N	2.0 µm to 2.6 µm	150 °C to 1200 °C	50 : 1 to 75 : 1	2 ms	RS-485	Laser aiming light
Ratio pyrometers						
DSRF 11N	0.7 µm to 1.1 µm	600 °C to 3000 °C	50 : 1 to 150 : 1	5 ms	RS-485	Laser aiming light
DGRF 11N	1.5 µm to 1.9 µm	300 °C to 2300 °C	50 : 1 to 150 : 1	5 ms	RS-485	Laser aiming light

PYROSPOT Series 4

Fixed pyrometers for industrial application

Series **4 – Pyrometes with small sensor head and separate electronics**

- Large OLED display and keys
- Parameterization directly at the device
- Best price-performance ratio for OEM
- Protection class IP65

Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DS 4N	0.8 µm to 1.1 µm	600 °C to 2500 °C	32 : 1 to 64 : 1	10 ms	RS-485	None
DG 4N	1.5 µm to 1.8 µm	250 °C to 1800 °C	32 : 1 to 64 : 1	10 ms	RS-485	None
DA 4P	around 3.43 µm	50 °C to 400 °C	15 : 1	40 ms	RS-485	None
DT 4G	around 5.0 µm	200 °C to 1800 °C	20 : 1	100 ms	RS-485	None
DT 4L	8 µm to 14 µm	–40 °C to 1000 °C	20 : 1	100 ms	RS-485	None

PYROSPOT Series 2x and 3x

Fixed pyrometers for industrial application

Series **25 – Compact pyrometers with parameterization interface**

- 2-wire pyrometers with convincing price-performance ratio
- Fixed optics
- Stainless steel housing IP65

Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DT 25L	8 µm to 14 µm	–20 °C to 700 °C	40 : 1	200 ms	Parameter interface	Optional: laser-aiming light adapter

Series **30/34 – Extremely temperature resistant pyrometers with excellent price-performance ratio**

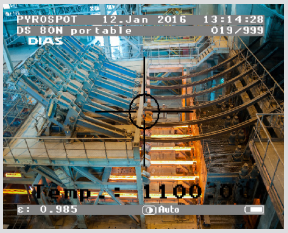
- Pyrometers with fiber optics, e.g. for glass and brick industry
- Fixed optics with air purge unit and quick lock
- Protection class IP65

Device type	Spectral range	Temperature range	Distance ratio	t_{95}	Interface	Aiming/targeting aid
DSF 30NG	0.8 µm to 1.1 µm	600 °C to 1800 °C	200 : 1	10 ms	USB	None
DSF 34NG	0.8 µm to 1.1 µm	600 °C to 1800 °C	200 : 1	10 ms	RS-485	None

PYROSPOT Series 8x

Portable pyrometers for the use in heavy industry

Series **80 – Fast portable pyrometers with TFT color display**



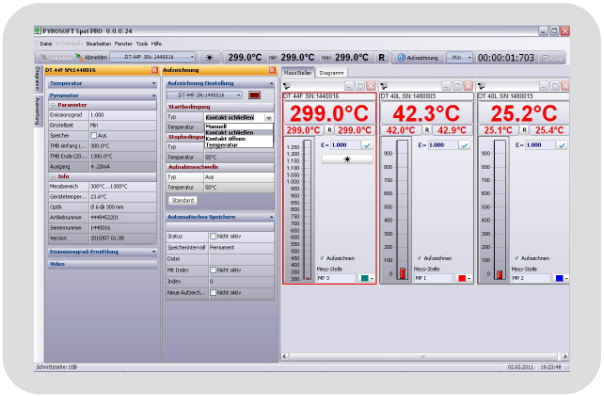
- High accuracy
- Easily focusable vario optics
- 2.5" TFT display with target marking and measured value display
- Robust housing

Device type	Spectral range	Temperature range	Distance ratio	t95	Interface	Aiming/targeting aid
DS 80NV	0.8 µm to 1.1 µm	550 °C to 2500 °C	200 : 1	5 ms	USB	TFT color display, laser
DG 80NV	1.5 µm to 1.8 µm	200 °C to 2000 °C	200 : 1	5 ms	USB	TFT color display, laser
Ratio pyrometers						
DSR 80NV	0.7 µm to 1.1 µm	500 °C to 2500 °C	50 : 1 to 200 : 1	5 ms	USB	TFT color display, laser

Extras

••• Pyrometer software PYROSOFT Spot and PYROSOFT Spot Pro

For the evaluation and further processing of acquired measurement data DIAS offers two variants for its PYROSPOT pyrometers. These are the free Windows software **PYROSOFT Spot** and the paid version **PYROSOFT Spot Pro**. The Pro version allows the visualization and recording of measured values of several pyrometers connected at the same time, whereas the free version only allows this for one connected pyrometer. The video image can also be displayed on an additionally available TFT display.



Further functions are:

* Trigger functions[1)]
* Extensive statistical analysis of measurement data[1)]
* Export of measured data as text file and automatic creation of Excel spreadsheets
* Video functions for pyrometers with integrated camera module
* Integrated calculator for easy calculation of optics parameters
* Display and parameterization of the optional display unit and digital displays[1)]
* Automatic emissivity determination
* Report generation from template document

[1)] Only available for PYROSOFT Spot Pro

••• Accessories for all pyrometer series PYROSPOT

A wide range of mechanical, optical and electrical accessories are available for our pyrometer series.

Accessories	Series 4	Series 10	Series 11	Series 25	Series 3x	Series 40	Series 42/47	Series 44	Series 48	Series 5x
Mounting angle, fixed	✓		✓	✓	✓	✓	✓	✓	✓	
Mounting angle, adjustable		✓	✓	✓		✓	✓	✓	✓	✓
Ball and socket mounting		✓				✓	✓	✓	✓	
Air purge unit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sighting tube		✓	✓	✓	✓	✓	✓	✓	✓	✓
Cooling plate		✓								
Cooling jacket with air purge unit		✓				✓	✓	✓	✓	✓
ATEX housing		✓						✓		
Mirror 90°	✓	✓	✓			✓	✓	✓	✓	✓
Vacuum flange/Vacuum lead-through		✓	✓			✓	✓	✓	✓	✓
Windlow slide		✓				✓	✓	✓	✓	✓
Protection class		✓	✓			✓	✓	✓	✓	✓
Ring nut with protection class		✓	✓			✓	✓	✓	✓	✓
Connection cable		✓	✓	✓	✓	✓	✓	✓	✓	✓
Interface adapter RS-485 to USB	✓	✓	✓		✓[2)]			✓		✓
Interface adapter RS-485 to ProfiBus DP	✓	✓	✓		✓[2)]			✓		✓
Ethernet Interface box DCU^{IoP}		✓	✓		✓[2)]			✓		✓
Interface adapter video to USB		✓								✓
Power supply 24 V	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Digital display	✓	✓	✓	✓	✓	✓	✓	✓		✓
Display and control unit		✓	✓	✓	✓	✓	✓[3)]	✓		✓
Handheld programming device DHP 1040		✓	✓	✓	✓	✓		✓		✓
TFT display 3.5"		✓								✓

More accessories available on request. [2)] Only series 34. [3)] Only series 42.

Networking and calibration

••• Integration into local networks – Ethernet interface box DCU^{IoP}

The integration into local networks for data transfer and parameterization can be done with our pyrometers with Ethernet interface (**PYROSPOT series 47**) or with the **Ethernet interface box DCU^{IoP}**. All PYROSPOT pyrometers with RS-485 interface can be connected to the Ethernet interface box DCU^{IoP}. This makes it possible to operate several pyrometers via one connection under one IP address. Video signals can also be transmitted.

A wireless connection also offers the possibility of uncomplicated commissioning, maintenance and on-site checks by means of smartphone or tablet web browsers. An integrated data logger enables the recording of measurement data from the pyrometers.

••• Calibration

For the calibration and verification of radiation thermometers and thermal imagers DIAS Infrared GmbH manufactures blackbody radiators. The following overview contains selected calibration sources of the **PYROTHERM** series.

Calibration sources PYROTHERM		
Device	**Temperature range**	**Type**
CS 120	–15 °C to 120 °C	Surface radiator
CS 400	50 °C to 400 °C	Surface radiator
CS 500	50 °C to 500 °C	Surface radiator
CS 1200	300 °C to 1200 °C	Cavity radiator
CS 1500	300 °C to 1500 °C	Cavity radiator
CS F35 to F150	35 °C to 150 °C [1]	Surface radiator
CCS 130	30 °C to 130 °C [2]	Surface radiator

[1] Fixed temperature factory-set between 35 °C and 100 °C (in 5 °C steps) and between 100 °C and 150 °C (in 10 °C steps) [2] Fixed temperatures factory-set between 30 °C and 130 °C (in 1 °C steps)

The digital DIAS **transfer radiation thermometers** of the **PYROSPOT 10 cal series** are particularly long-term stable and highly accurate calibrated instruments, which have been specially designed for checking calibration radiators and for traceable calibration of infrared temperature measuring instruments. The scope of delivery includes a test certificate with 10 measuring points (traceable to PTB standards) or an optional PTB calibration certificate. On request, we can perform the calibration of your infrared temperature measuring instruments in **our calibration laboratory as a service**.

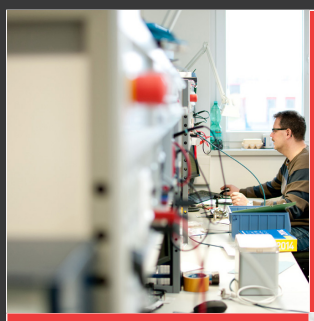
Transfer radiation thermometers for calibration						
Device	Spectral range	Temperature range	Distance ratio	t95	Interface	Aiming/targeting aid
DS 10N cal	0.8 µm to 1.1 µm	600 °C to 2500 °C	200 : 1	1 s	RS-485	Through-lens sighting
DG 10N cal	1.5 µm to 1.8 µm	300 °C to 1800 °C	200 : 1	1 s	RS-485	Through-lens sighting
DY 10F cal	around 3.9 µm	200 °C to 1500 °C	70 : 1	1 s	RS-485	Through-lens sighting
DY 10G cal	around 5.0 µm	100 °C to 1400 °C	70 : 1	1 s	RS-485	Laser aiming light
DY 10L cal	8 µm to 14 µm	0 °C to 1000 °C	70 : 1	1 s	RS-485	Laser aiming light

DIAS Infrared Systems

Do you have any questions?

We will be happy to advise you and prepare an individual, non-binding offer for your measurement task that takes into account specific conditions on site. With us, you get planning, manufacturing, commissioning, maintenance and customer support from a single source.

Contact: sales@dias-infrared.de
Phone: +49 351 896 74 10



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