

# CYCLOPS 055L

A FAMILY OF HIGH PRECISION PORTABLE  
INDUSTRIAL PYROMETERS



1000 to 2000 °C / 1832 to 3632 °F



**LAND**  
**AMETEK®**



QUALITY CUSTOMER SOLUTIONS

# CYCLOPS 055L

A FAMILY OF HIGH PRECISION PORTABLE INDUSTRIAL PYROMETERS

AMETEK LAND HAS BEEN MANUFACTURING PRECISION MEASURING EQUIPMENT SINCE 1947.

WE ARE SPECIALISTS IN NON-CONTACT TEMPERATURE MEASUREMENT AND COMBUSTION MONITORING WITH APPLICATIONS ACROSS DIVERSE INDUSTRIES SUCH AS STEEL AND GLASS MAKING, POWER GENERATION AND CEMENT MANUFACTURE.

As part of AMETEK Process & Analytical Instruments Division since 2006, our customers benefit from the worldwide AMETEK sales and service team.

DESIGNED FOR ACCURATE TEMPERATURE MEASUREMENT IN ANY APPLICATION IN TEMPERATURE RANGES OF 200 TO 3000 °C / 392 TO 5432 °F

**The Cyclops family is the industry leading standard for high quality portable non-contact pyrometers.**

Using camera quality Through-The-Lens sighting, what you see is what you measure. The single handed, ergonomic design enables you to make temperature measurements in hostile environments. Hold on to a hand rail and simultaneously take safe and accurate temperature readings. The high quality fully focusable lenses ensure the smallest spot size measurements at any distance. On-board data-logging means accurate measurements are stored directly to the instrument.



## TAKING A MEASUREMENT

ALL PROCESSED TEMPERATURE VALUES ARE SHOWN CONTINUOUSLY ON THE DISPLAY WHEN THE TRIGGER IS PRESSED.

- Peak temperature
- Continuous temperature
- Average temperature
- Valley temperature
- Meltmaster temperature - C055L Models only.

The Cyclops L range provides fast and simple data logging with on-board storage. Bluetooth® and USB connectivity allow the data to be downloaded periodically to a PC or live streamed to a Mobile device for analysis and trending.

**Four trigger operating modes for datalogging are available:**

- **Single Mode:** logs a measurement for each trigger release
- **Latch Mode:** logs continuous, average, peak and valley readings at a user defined rate
- **Burst Mode:** logs a stream of measurements while the trigger is pressed - approximately 30 readings / sec
- **Route Mode:** Precisely execute pre-configured routes for consistent, long-term readings. Available using the standalone instrument or featuring increased functionality with the mobile software

## LOGGER SOFTWARE

Transfer data to a computer or rugged mobile device running Cyclops Logger software in order to view, analyze and record live temperature readings. All stored measurement data can be displayed on the Measurement screen which combines the current reading, table view and trend view.

The Trend View displays Peak, Instantaneous, Average and Valley temperatures, Logger settings, Route Manager, Background Correction plus Timed Logging (taking measurements at pre-defined intervals between 1 and 60 secs).



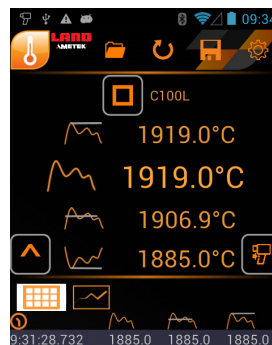
The Table View showing Instantaneous, Valley, Average and Peak, plus the unique Meltmaster temperature (on the 055 L model) readings.



When connected to a Cyclops pyrometer, the Logger software records instantaneous temperature measurements each time the pyrometer trigger is pressed.

The Cyclops Logger Software also allows you to manage the unique ROUTE configurations i.e. set up a sequence of measurement points covering your plant or process, ensuring consistent, repeatable data for accurate trending.

Connection between the Cyclops L model pyrometers and the computer can be either wireless (via Bluetooth®), or via a USB cable.



# SPECIFICATION & DESIGN



## 1: MENU CONTROLS

Simple, easy to use controls to select required mode from the icon based menu.

## 2: MULTI-FUNCTION DISPLAY

The bright, backlit external display panel provides an indication of status and configuration of the pyrometer together with four simultaneous live measurement modes.

The panel displays an intuitive, icon-driven, language-free menu system navigated via key pad controls:

- Mode selection
- Emissivity
- Window Compensation
- Communication Status
- Battery Status
- Alarm Status
- Standalone Route Mode
- Clock

## 3: OPTICS

Through-The-Lens reflex optical system gives a precise definition of the target spot and a simultaneous backlit display of the user selected temperature mode in the viewfinder.

## 4: CONNECTIVITY

Wireless Bluetooth® or USB technology offers datalogging using the Cyclops Logger software to a suitable industrial mobile or laptop/notebook, eliminating safety hazards when using cables.

## 5: RUGGED CASING

The instrument casing allows for extended periods of exposure to harsh environments.

## 6: EASY OPERATION

A number of easily set operating modes guarantees easy single-handed operation even in hazardous conditions.

## 7: JUMBO DISPLAY

AMETEK Land Jumbo Display is an LED display unit, which connects via Bluetooth to the Cyclops 055L, to display instant temperature measurement updates.

## KEY APPLICATIONS

**Foundries** - Melting furnace, Liquid Metal transfer to the ladles, Ladle treatment location, Pouring section, Tundish

**Steel Plants** - Blast Furnace runners, Liquid Metal stream at SMLP, continuous caster CCM open stream, Tundish CCM.

**Primary Aluminium Production** - Anode Preparation castings, Cathode Metal casting locations

## ACCESSORIES

A RANGE OF STANDARD AND OPTIONAL ACCESSORIES IS AVAILABLE INCLUDING:

1. **Heat resistant jacket** is standard on every model; to provide protection against excessive heat and dust
2. **Waterproof carry case** is available as an optional accessory. (Standard with all Premium Kits)
3. **Long Eye Relief Eyepiece adapter** for when you are wearing protective goggles or a hard hat with face shield, e.g. when you cannot directly see through the eyepiece



## FEATURES & BENEFITS

### Standard Bluetooth and USB connectivity

- Wireless and USB options for communicating straight to a mobile device or PC

**Rugged instrument casing** - can withstand harsh environments for extended periods. Protection against high temperatures as well as bumps and drops

**Calibrated and traceable to National Standards** - your guarantee of measurement accuracy

### Built in Route Mode -

Methodically execute pre-configured routes to ensure accurate readings and long term data trending

**Logger software** - data trending and analysis to identify on-site trends, improve process efficiency or protect assets and prolong their life cycles

**Internal Data Logging up to 9999 readings and 9 routes** - Onboard storage for single handed operation without the need for a separate storage device

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## SPECIFICATIONS

Measurement range:	1000 to 2000 °C / 1832 to 3632 °F
Display:	External backlit LCD display 4-digit LCD in viewfinder
Measuring modes:	Continuous, Peak, Valley and advanced Meltmaster
Data logging:	9999 readings and 9 routes internally; Mobile (4GB standard storage) or PC logger software ( via Bluetooth® or USB connector)
Data logging modes:	Classic, Burst, Latched, Route
Optical system:	9° field of view; eyepiece adjustable -3.75 to +2.5 diopters
Focusing range:	Fixed focus, nominally at 5 m / 197 in. from pyrometer body datum
Minimum target size:	Parallel 28 mm / 1.1 in target spot diameter from lens to 5 m / 197 in.
Spectral response:	Nominally 0.55 µm
Emissivity adjustment:	0.10 to 1.20 in 0.01 step graduations
Response time:	30 ms
Display update time:	0.5 s
Accuracy:	<0.5% (K)
Measurement resolution:	0.1 °C / 1 °F
Measurement field of view:	Fixed Focus
Repeatability:	<1 °C / 2 °F
Operating temp range:	0 to 50 °C / 32 to 122 °F
Power requirement:	One MN1604 / 6LR61 / PP3 Battery or USB
Output:	Bluetooth®/USB Connector
Weight:	0.83 kg / 1.8 lb.
Sealing:	IP40
Free Data-logger Software:	Available at <a href="https://www.ametek-land.com/products/software/cyclopslogger">https://www.ametek-land.com/products/software/cyclopslogger</a> ; For Android devices, the Cyclops Data Logger App is available through the Google Play Store
Standard accessories:	Lens cap, protection window/filter, battery, wrist strap, USB cable, heat protection jacket
Optional accessories:	Bluetooth Jumbo display, Waterproof carry case, long eye relief eyepiece

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"The Cyclops 055L has been easy to use and provides a fast measurement. It is highly accurate, even while pouring, right up to the last mould. Its performance and excellent return on our investment means we would certainly recommend AMETEK Land for this application."

**Shri Dhirubhai Patel, Managing Director at DN Castech**

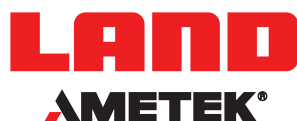
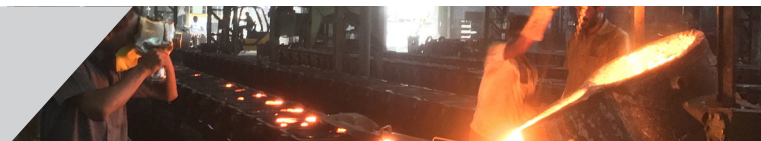


"Using the Cyclops 055L has significantly reduced the amount we spend on thermocouple tip replacements each month. The instruments are easy to use, provide fast, accurate measurements, and increased safety for the user. We definitely recommend AMETEK Land, both for their liquid metal measurement solution, and for the expert support they have provided."

**Puneet Vinayak, Director at Amar Udyog**

"AMETEK Land's Cyclops Meltmaster infrared, noncontact thermometer is a highly effective solution for accurate temperature measurement of molten metal. It provides easy, accurate point-and-measure temperature readings. Since its introduction, our plant has significantly reduced our expenditure on disposable dip-type thermocouples."

**Mr S Kuppusamy, Vice President of PSG Foundries**



### CONTACT US



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**We are fully committed to Quality Assurance. See all our accreditations at [AMETEK-LAND.COM/QUALITY](http://AMETEK-LAND.COM/QUALITY)**