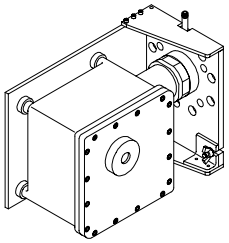
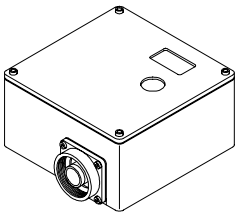
E²T | E²TECHNOLOGY CORPORATION

INFRARED TEMPERATURE MEASUREMENT INSTRUMENTS AND SYSTEMS

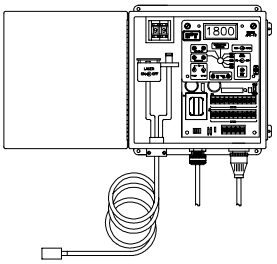
GENERAL CATALOG



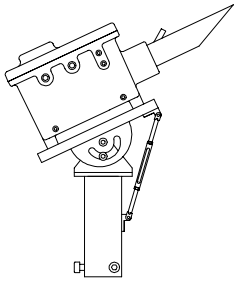
PULSAR II
Explosion-proof



DICHROMA
Two-color



PHOTON
Fiber-optic



QUASAR
Explosion-proof

Successful and continuous output of quality products from your plant depends frequently upon temperature measurement. The failures common to Thermocouples (T/C) and Resistance Temperature Devices (RTD) when used beyond their limits can turn these measurements into persistent and unresolved problems.

Non-contact Infrared Thermometers (IR-T) present effective solutions:

- No danger of burnout (safe distance from source)
- No damage to the IR-T from measuring extremes
- Critical components sealed against corrosion
- Fast response (1mS)
- Does not influence temperature to be measured

The non-contact infrared thermometer is a powerful process control tool. It measures temperature through flames, glass, plastics and a variety of gases without affecting the reading. Because there is no direct contact with the object, it can measure the temperature of moving products, hazardous or corrosive materials, extremely high temperatures and very small specimens.

E²TECHNOLOGY provides a non-contact thermometer for virtually every kind of temperature measurement job. If what you measure is too hot, hard to reach, hazardous, corrosive, cannot be touched, changes or moves too fast for RTDs and T/Cs, it's just right for a non-contact thermometer.

E²TECHNOLOGY offers versatile infrared thermometers which incorporate an electro/optical package into a single housing. They are equipped with precision sight-through optics with four target sizes down to 0.015". Ten different spectral ranges are available to provide the ability to measure wide temperature ranges.

E²TECHNOLOGY's Infrared thermometers are used all over the world in severe industrial environments, in petrochemical plants, in light manufacturing and research laboratories.

APPLICATIONS

GENERAL PURPOSE
Measures medium to high temperatures of solid products through glass
400° to 5500°F
205° to 3040°C
1.9 to 2.5µ

FLAME FILTER
Measures cool or hot product immersed in hot gases
400° to 5500°F
205° to 3040°C
2.2µ

METALS
Measures hot or molten metal, silicon, substrates and gallium arsenide
400° to 5500°F
205° to 3040°C
1.5 to 1.7µ

GLASS SUBSURFACE
"Sees" through clean flames for sub-surface glass furnace control
400° to 5500°F
205° to 3040°C
3.5 to 4.1µ

GLASS SURFACE
With no flame present, measures glass and quartz surface
600° to 5500°F
315° to 3040°C
4.8 to 5.3µ

GAS MIXTURES
Measures bulk temperature of complex gas mixtures
600° to 5500°F
315° to 3040°C
1.0 to 5.0µ, 2.6 to 2.9µ

TWO-COLOR
"Sees" through dust and smoke and ignores emissivity changes
1470° to 5500°F
800° to 3040°C
0.9 and 1.05µ

FIBER-OPTIC
"Sees" through glass and clean flame for process heat control
400° to 5500°F
205° to 3040°C
1.5 to 1.7µ

WE MAKE INFRARED WORK FOR YOU

PULSAR II
Model 7000SR-EXP

DESCRIPTION

For high temperature reactors. The explosion-proof housing is *CSA certified* for:
Class I, Div 1 Grps CD
Class I, Div 2 Grps ABCD
and *CENELEC certified* for:
EExd IIB T4

FEATURES

- Wide temperature range
- Swing-out fixture
- Thermocouple back-up
- Clean-out probe
- Digital emissivity control
- Cooling and heating

SPECIFICATIONS

SPAN:	400 - 5500°F (205 -3040°C)
OUTPUT:	1 mV /° and 4-20 mA
POWER:	115/230 VAC, 24 VDC
AMBIENT:	-40 -175°F (-40 - 80°C)
SPOT SIZE:	150:1
FOCUS:	20" - infinity
RESPONSE:	100mS (7mS minimum)
ACCURACY:	±1% read.
REPEAT:	±0.5% read.
RATING:	EXP, NEMA 4
SIZE:	13" (w) x 12"(h) x 16"(d)
WEIGHT:	71 lbs (32.2 kg)

QUASAR
Model 8100PM-EXP

DESCRIPTION

The QUASAR in its explosion-proof housing has been designed for continuous duty monitoring of flare stack pilot flame conditions.

FEATURES

- Atmospheric signal correction
- Superb sight-through optics
- Explosion-proof housing
- Customized 4 and 20mA output
- Delay circuit
- Relay alarm

SPECIFICATIONS

OUTPUT:	4 and 20mA and relay
POWER:	115 / 230VAC
AMBIENT:	-40 -175°F (-40 - 80°C)
SPOT SIZE:	75:1
RESPONSE:	10mS
RATING:	EXP
SIZE:	13" (w) x12"(h) x 16"(d)
WEIGHT:	63 lbs (28.6 kg)

QUASAR
Model 8100FM-EXP

DESCRIPTION

The QUASAR in its explosion-proof housing has been designed for continuous duty monitoring of flare stack flaring conditions.

FEATURES

- Atmospheric signal correction
- Superb sight-through optics
- Explosion proof housing
- Customized 4 and 20mA output
- Delay circuit
- Relay alarm
- 1/4 mile range

SPECIFICATIONS

OUTPUT:	4 and 20mA and relay
POWER:	115 / 230VAC
AMBIENT:	-40 -175°F (-40 - 80°C)
SPOT SIZE:	60:1
RESPONSE:	10 mS
RATING:	EXP
SIZE:	13" (w) x 12"(h) x 16"(d)
WEIGHT:	63 lbs (28.6 kg)

QUASAR
Model 8100SM-EXP

DESCRIPTION

The QUASAR in its explosion-proof housing has been designed with ratio-detection pyrometry for continuous duty monitoring of smoke output and steam control on flare stacks.

FEATURES

- Atmospheric signal correction
- Superb sight-through optics
- Explosion-proof housing
- Customized 4-20mA output
- Delay circuit
- Relay alarm
- 1/4 mile range

SPECIFICATIONS

OUTPUT:	4-20mA and relay
POWER:	115 / 230VAC
AMBIENT:	-40 -175°F (-40 - 80°C)
SPOT SIZE:	60:1
RESPONSE:	1.0 sec
RATING:	EXP
SIZE:	13" (w) x 12"(h) x 16"(d)
WEIGHT:	63 lbs (28.6 kg)

PULSAR II
Model 7000EH-2

DESCRIPTION

The PULSAR operates in -40 to 175°F when mounted in the EH-2 extreme environment housing (1/4" thick cast aluminum) with cooling and heating.

FEATURES

- Choice of 9 spectral filters
- Wide temperature range
- Digital emissivity control and DPMs may be mounted internally
- Cooling and heating capability

SPECIFICATIONS

SPAN:	400 -5500°F (205 -3040°C)
OUTPUT:	1 mV/° and 4-20 mA
POWER:	115 / 230 VAC, 24 VDC
AMBIENT:	-40 -175°F (-40 - 80°C)
SPOT SIZE:	0.015" minimum at 2.8"
FOCUS:	2.8" - infinity
RESPONSE:	30 mS standard
ACCURACY:	±1% read.
REPEAT:	±0.5% read.
RATING:	NEMA 4
SIZE:	8.5" (w) x 4.6"(h) x 8.5"(d)
WEIGHT:	11 lbs (5 kg)

PULSAR II
Model 7000-EXP

DESCRIPTION

The PULSAR is mounted in the EXP explosion-proof housing designed for hazardous areas.

FEATURES

- Explosion-proof housing
- Choice of 9 spectral filters
- Wide temperature range
- Digital emissivity control
- Cooling and heating capability

SPECIFICATIONS

SPAN:	400 -5500°F (205 -3040°C)
OUTPUT:	1 mV/° and 4-20 mA
POWER:	115 / 230 VAC, 24 VDC
AMBIENT:	-40 - 175°F (-40 - 80°C)
SPOT SIZE:	0.015" minimum at 2.8"
FOCUS:	2.8" - infinity
RESPONSE:	30 mS standard
ACCURACY:	±1% read.
REPEAT:	±0.5% read.
RATING:	EXP
SIZE:	13" (w) x 2"(h) x 16"(d)
WEIGHT:	38 lbs (17 kg)

DICHROMA
Model 8000

DESCRIPTION

A dual wavelength thermometer which eliminates measurements from interfering sources.

FEATURES

- Ratio-detection circuitry
- Precision sight-through optics
- Process control correction
- Cooling and heating

SPECIFICATIONS

SPAN:	1470 - 3630°F (800-2000°C) Four ranges
OUTPUT:	1 mV /° and 4-20 mA
POWER:	115/230 VAC
AMBIENT:	-40 - 175°F (-40 - 80°C)
SPOT SIZE:	150:1
FOCUS:	20" to infinity
RESPONSE:	1 sec (50 mS minimum)
ACCURACY:	±1% read.
REPEAT:	±0.5% read.
RATING:	NEMA 4
SIZE:	8.5"(w) x 4.6"(h) x 8.5"(d)
WEIGHT:	11 lbs (5 kg)

COMET
Model 6000

DESCRIPTION

Fast compact IR thermometer with 4-20 mA or 1 mV/° output. Same as PULSAR II with narrower spans.

FEATURES

- Precision sight-through optics
- Spot sizes to 0.015"
- Wide selection of spectral and temperature ranges
- Digital emissivity
- Cooling and heating capability

SPECIFICATIONS

SPAN:	400 - 5500°F (205 - 3040°C) Two ranges
OUTPUT:	1 mV /° or 4-20 mA
POWER:	115/230 VAC, 24 VDC
AMBIENT:	-40 -120°F (-40 - 50°C)
SPOT SIZE:	0.015" minimum at 2.8"
RESPONSE:	200 µS
ACCURACY:	±1% read.
REPEAT:	±0.5% read.
SIZE:	3.1"(w) x 4"(h) x 9.3"(d)
WEIGHT:	3 lbs (1.36 kg)

PHOTON
Model 6100

DESCRIPTION

The PHOTON fiber-optic laser-aimed thermometer controls the timing circuit of a heating system to operate the shut-off signal based on part temperature.

FEATURES

- Controller included
- Peak picker displays part temperature
- RF immunity
- Dual set-points
- Signal outputs of 4-20 mA or 1 mV/°

SPECIFICATIONS

SPAN:	400 - 5500 °F (205 - 3040°C) Discrete ranges of 500°C
OUTPUT:	4-20 mA and 1 mV /°
POWER:	115/230 VAC
AMBIENT:	-40 -120°F (-40 - 50°C)
SPOT SIZE:	0.100" at 1.0"
RESPONSE:	200 µS
ACCURACY:	±1% full scale
REPEAT:	±0.5% read.
SIZE:	8.0"(w) x 9.0"(h) x 5.0"(d)
WEIGHT:	11 lbs (5.0 kg)

METEOR
Model 300

DESCRIPTION

Heat pulse switch for detecting rapid temperature changes.

FEATURES

- Operating distance limited only by field of view and heat from target
- 45° field of view
- Extreme environments
- High sensitivity
- High speed response

SPECIFICATIONS

SENSITIVITY:	0.4°F/sec. rarte of change (optional 4° and 40°F/sec)
RESPONSE:	100 mS
ALARM RATE:	30/minute
OUTPUT:	Relay, 10A/115 VAC
POWER:	115 / 230 VAC
AMBIENT:	0 - 150°F (-18 - 65°C)
SPOT SIZE:	45°
FOCUS:	Unrestricted
RATING:	Nema 4
SIZE:	6.5"(w) x 4.25"(h) x 6.5"(d)
WEIGHT:	6.5lbs. (2.9kgs)

SOLAR
Model TD100

DESCRIPTION

Heat switch for detecting the presence or temperature of a hot surface.

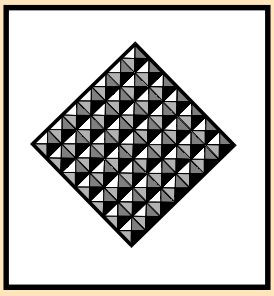
FEATURES

- Long life of over 500 million contact closures
- Rugged, simple, no moving parts
- Extreme environments
- All forms of materials including translucent
- Fast response

SPECIFICATIONS

SPAN:	425°-3000°F (218-1650°C)
OUTPUT:	Solid state or mechanical relay 5A/12-250VAC
POWER:	115 / 230 VAC 10W
AMBIENT:	0 to 150°F (-18 - 65°C)
SPOT SIZE:	30:1
FOCUS:	Unrestricted
REPEAT:	5%
RATING:	Nema 4
SIZE:	5.6"(w) x 4.9"(h) x 5.4"(d)
WEIGHT:	8 lbs (3.63 kg)

BLACKHOLE
Model BH-875



DESCRIPTION

Furnace tube target will minimize the effect of reflection and enhance and stabilize the emissivity of the tube skin.

FEATURES

- Determines tube temperature within 1% error (close to a blackbody radiator)
- Does not interfere with temperature gradients due to its small size

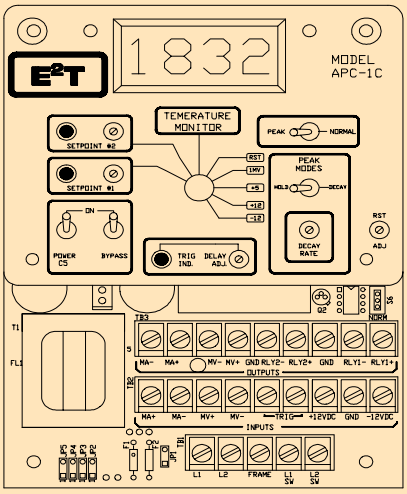
SPECIFICATIONS

SPAN:	Up to 2500°F (1371°C)
AMBIENT:	Reducing environment
ACCURACY:	±1% read. system
SIZE:	0.88"(w) x 0.1"(h) x 0.88"(d)
WEIGHT:	0.2oz (5.67 g)

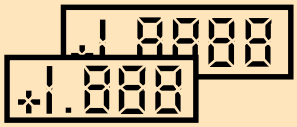
HIGH SPEED CONTROLLER DESIGNED FOR INFRARED

Model APC-1C

POWER INPUT:	115/230 VAC
SIGNAL INPUTS:	4-20 mA or DC volts (1mV/°)
SIGNAL OUTPUTS:	4-20 mA and DC volts (1mV/°)
ALARMS:	Dual setpoints
PEAK MODES WITH AUTO AND EXTERNAL RESETS:	Peak hold Peak decay Sample hold
PROCESS SPEED:	200µS feed-through response
DELAYS:	Trigger and peak delays
SIZE:	10"(h) x 8"(w) x 6"(d)



PANEL METERS



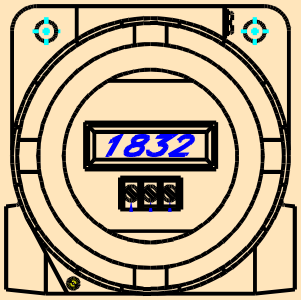
Model DPM-1
4 1/2 digit LED
mV panel meter

Model DPM-4
4 1/2 digit LCD
mV meter

Model DPM-2
4 1/2 digit LED
mV Panel meter
and controller with
2 setpoint relays

Model DPM-3
3 1/2 digit
subminiature LCD

EXPLOSION-PROOF METER



Model DPM-6XP
4 1/2 digit LCD Panel Meter
mA Input
Self Powered
CENELEC Certified

ACCESSORIES AND OPTIONS

- Mountings
- Swing-out fixtures
- Environmental housings
- Hazardous area housings
- Water-cooled bases
- Vortex air coolers
- Radiation shields
- Electrical heaters
- Airpurge tubes
- Thermocouples
- Digital thermocouple displays
- Internal panel meters
- Four spot sizes
- Choice of lenses
- Remote relays
- Digital emissivity switches

E²T

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