



# Thermo GEAR

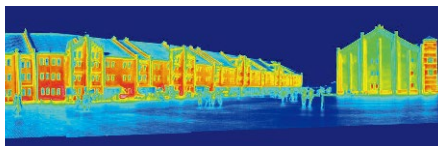
## G 120EX/G 100EX Series

### New EX Series with Upgraded Performance!!

- ▶ Measures high temperature up to 1500°C
- ▶ NETD : 0.04°C (with S/N improvement at 30°C)
- ▶ 'Averaging Improvement' function for better image quality
- ▶ Standard grip belt for better safety & operability

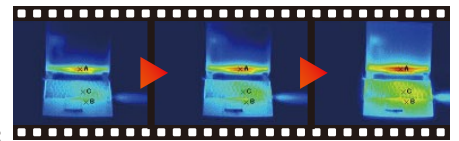
#### Wide-Angle Shot

**World's First** \*1  
Panoramic Thermal Image \*2



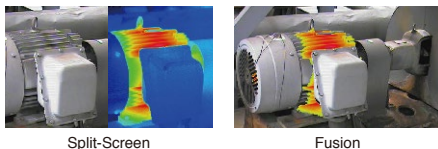
#### Thermal Image Movie

Direct Recording on SD Card  
in Fully Radiometric  
(G120EX:10fps, G120EXD:8.5fps)\*2



#### IR/Visual Integrated Display

Split-Screen, Fusion, Alpha Blending

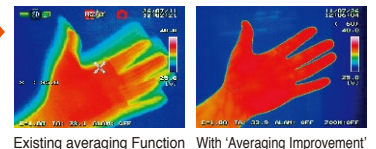


Split-Screen

Fusion

#### Averaging Improvement

Minimizes residual images  
of moving object  
while averaging



Existing averaging Function

With 'Averaging Improvement'

#### Alarm Function

**World's First** \*1  
Vibration\*2  
Sound and Display

#### High Temp Measurement

Up to 1500°C,  
Standard

#### 3.5 inch LCD Screen

Tilting Display for Flexible  
Easy Shooting Posture

#### Wide Field of View

Ideal for Short Distance  
32°(H) x 24°(V)

#### Macro Shot

Min. Focus Distance:10cm

#### Easy Operation

GUI and Joystick for  
Intuitive Operation,  
Auto Focus/ Level-Sense

\*1:World's first [Panoramic Thermal Image Shooting Function],[Vibration Alarm Function] (Surveyed by our company at end of December,2009.) \*2:Provided on G120EX Series only.

## Specifications

Item	G120EX	G120EXD	G100EX	G100EXD
<b>Basic Performance</b>				
Infrared Detector	Uncooled Focal Plane Array (microbolometer)			
Spectral Range	8 to 14μm			
Measuring Range	-40 to 1500°C			
Sensitivity (NETD)	0.04°C at 30°C (with S/N improvement)			
Accuracy	±2°C or ±2%*1			
Frame Rate	60Hz	8.5Hz	60Hz	8.5Hz
Detector Pixels	320(H)×240(V) pixels			
Field of View	32°(H)×24°(V) (with standard lens)			
Spatial Resolution	1.78mrad			
Focal Distance	10cm to infinity (with standard lens)			
Focus	Auto / Manual			
<b>Image Display</b>				
Auto Functions	Auto-scale, Auto-focus, Full-auto			
Color Pallet	Rainbow, Iris, Brightness, Hot iron, Hot white, Hot black			
Gradation	256/16/8 tones			
Visual Camera	CMOS camera 2M pixels			
	Fusion	Yes		
	Picture-In-Picture	Yes		
	Alpha Blending	Yes		
	Side-by-Side	Yes		
Display Functions	Digital Zoom	1 to 4 times continuous zoom		
	Multi-Image-Display	Display 9 images(replay mode)		
Image Quality Improvement	Averaging	Off / Σ4/ Σ8/ Σ16 (with ghost rejection)		
	Edge Enhancement	Yes	N/A	
	Filtering	Yes		
<b>Measuring Functions</b>				
Point Temperature	1 Center Point, 5 Movable Points			
	Temperature Search	MAX/MIN		
	Delta Temperature	Yes		
Temperature Display in Assigned Region	MAX, MIN and AVG in Box (for up to 5 Boxes)			
Line Profile	Horizontal, Vertical or Horizontal & Vertical			
Alarm function	Alarm Sound, Alarm Display, Color Alarm(ISO)			
	Vibration Alarm	Yes	N/A	
	Alarm Recording	Yes		
	Alarm Output	Yes		
Temperature Correction Function	Emissivity, Environment/Background, Distance, NUC			
	Emissivity	Multi-Point Correction, Emissivity Reverse Calculation, Emissivity Table		
Storage Device	SD Card, Compatibility SDHC			
<b>Storage / Output</b>				
Data Storage	Still Image : JPEG with Temperature Data (14 bit), Movie : SVX file (exclusive), Visual Image Simultaneously Recorded		Still Image : JPEG with Temperature Data (14 bit), Visual Image Simultaneously Recorded	
	Panoramic Image	Horizontal Equivalent to 100°, Vertical Equivalent to 75°		N/A
	Movie Recording	Max 10 fps in SD Card	Max 8.5 fps in SD Card	N/A
	Interval Recording	3s to 60min, Visual Image Simultaneously Recorded		
	Voice Annotation	30sec Recording/Replay per Image		
	Text Annotation	Annotate up to 128 Characters with each Thermal Image Import Characters from SD Card		
Interface	USB2.0 Mass-Storage			
	Video output	NTSC or PAL (Simultaneous use with LCD not available)		
	Alarm output	Available (Contact Closure, No Voltage)		
<b>Auxiliary Measuring Functions</b>				
Graphical User Interface's Supported Language	English, French, Spanish, German, Italian, Portuguese, Russian, Finnish, Danish, Norwegian, Swedish, Dutch, Chinese (Traditional, Simplified), Korean and Japanese.			
Display	3.5" LCD Monitor (with Tilt and Brightness Adjustment Available)			
Auxiliary Device	Laser Pointer	Yes (Class-2 Red color)		
	LED Light	Yes		
	Operating temperature / Humidity	-15°C to 50°C, 90%RH		
Environment Resistance	Vibration / Shock	29.4m/sec <sup>2</sup> (3G), 294m/sec <sup>2</sup> (30G)		
	EMC	Compliant to CE (Class A)		
	Dust / Splash Proof	IP54		
<b>Others</b>				
Battery Operation	4hours (typ), Rechargeable Li-Ion battery			
AC Power	100V to 220V AC, 50/60Hz			
Power Consumption	4.3W (typ)			
Dimensions	Approx. 212mm(H) × 75mm(W) × 138mm(D) (excluding projections)			
Weight	Approx. 800g (including Battery Pack)			
Standard Accessories	AC Adapter x1, Battery Charger x1, Rechargeable Li-Ion Battery x1, SD Card x1, USB Cable x1, Wristband x1, Grip Belt x1, Software x1, Operation Manual x1, and Carrying Case x1			
Standard Software	InfReC Analyzer NS9500LT			

\*1 Operating Temperature : 0 to 40°C

**InfReC** [InfReC] is the coined abbreviation word of "Infrared Camera" and also has the meaning of [The Device Recording Infrared Information]. Our product research and development is targeted at improving the quality of life by protecting people and simplifying their daily tasks while measuring temperature, controlling environments, enhancing security, etc.

■ Listed specifications, appearance and design are subject to change without notice. ■ Company and commodity names are trade names or registered trade marks of each company. ■ NIPPON AVIONICS Co., Ltd. will not be responsible for any damage of infrared detectors due to incoming strong light (e.g. laser) through lens(es). ■ This product is subject to Japanese Export Control Law. Depending on its destination, prior assessment and authorization may be required. When exporting from country of initial purchase destination, please be sure to follow that country's export regulations as it may require an export permit beforehand.

## PC Software

### InfReC Analyzer NS9500 Lite

Thermal Image Processing and Report Generator Software  
Easily identifiable menu system guides you to intuitive operation

#### [Features]

• **Easy Report Generation (MS-WORD/MS-EXCEL Format)**

• **Rich Processing Functions**

Fusion Display of Thermal Image / Visual Image  
Subtraction Function for Thermal Image

Panoramic Composite Function for Thermal Image  
Radiation Heat Quantity Analysis\*1

Length Measuring/Area Calculation Function\*1  
for Thermal Image

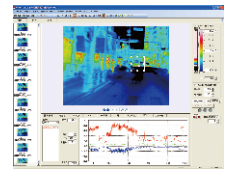
Trend Graph Display\*1

Line Profile Display

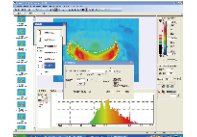
Drawing Function for Designated Point /  
Line / BOX / Circle\*1 / Polygon Shape\*1

Analysis for Max./Min./Peak Temperature

\*1: Optional Software Model NS9500 Standard only  
\* Compatible PC configuration, OS system and associated application software are to be consulted beforehand. Some old or new system might not be supported.



Trend Graph Display



Radiation Heat Quantity Analysis

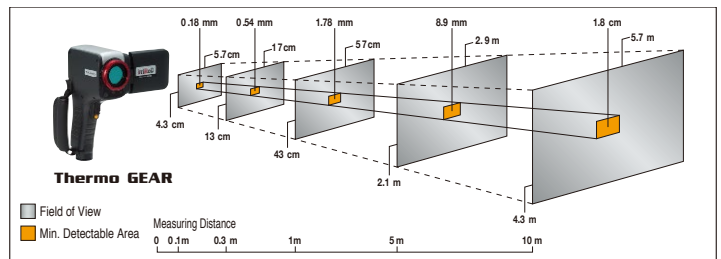


Panoramic Composite Function for Thermal Image

## Options

Options	Model	Specifications / Remarks
2 x Telephoto Lens	IFL-TX02A-B	16"(H) x 12"(V) 0.89mrad (f=28mm)
Rechargeable Battery Pack	ZUR18650F	2,500mAh, 4 Hours of Continuous use (typical)
Battery Charger	NC-LSC05-110V / NC-LSC05-220V	110v or 220v
AC Adapter	RC60G-09D-110V / RC60G-09D-220V	
LCD Hood	IFLU-F01A	
Video cable	FVC-135A	3.5mm plug, 1.5m
Tripod (small)	U9800BK	
InfReC Analyzer Standard	NS9500STD-B	PC Software

## Dimensions of Measuring Distance and Field of View (Standard 14mm Lens)



NIPPON AVIONICS has long experience and expertise in developing infrared cameras since the early 1970's.

There is a wide range of portable and fixed mount thermal imagers available. To find out more, visit us at : [www.avio.co.jp/english/](http://www.avio.co.jp/english/) or contact our local distribution partners.



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### WARNINGS & CAUTIONS

- Before using this product, please carefully read the provided Operation Manual "WARNINGS" & "CAUTIONS" section to ensure proper operation.
- Please do not place the product in high temperature, high humidity or high inert gas environments.

Distributor: