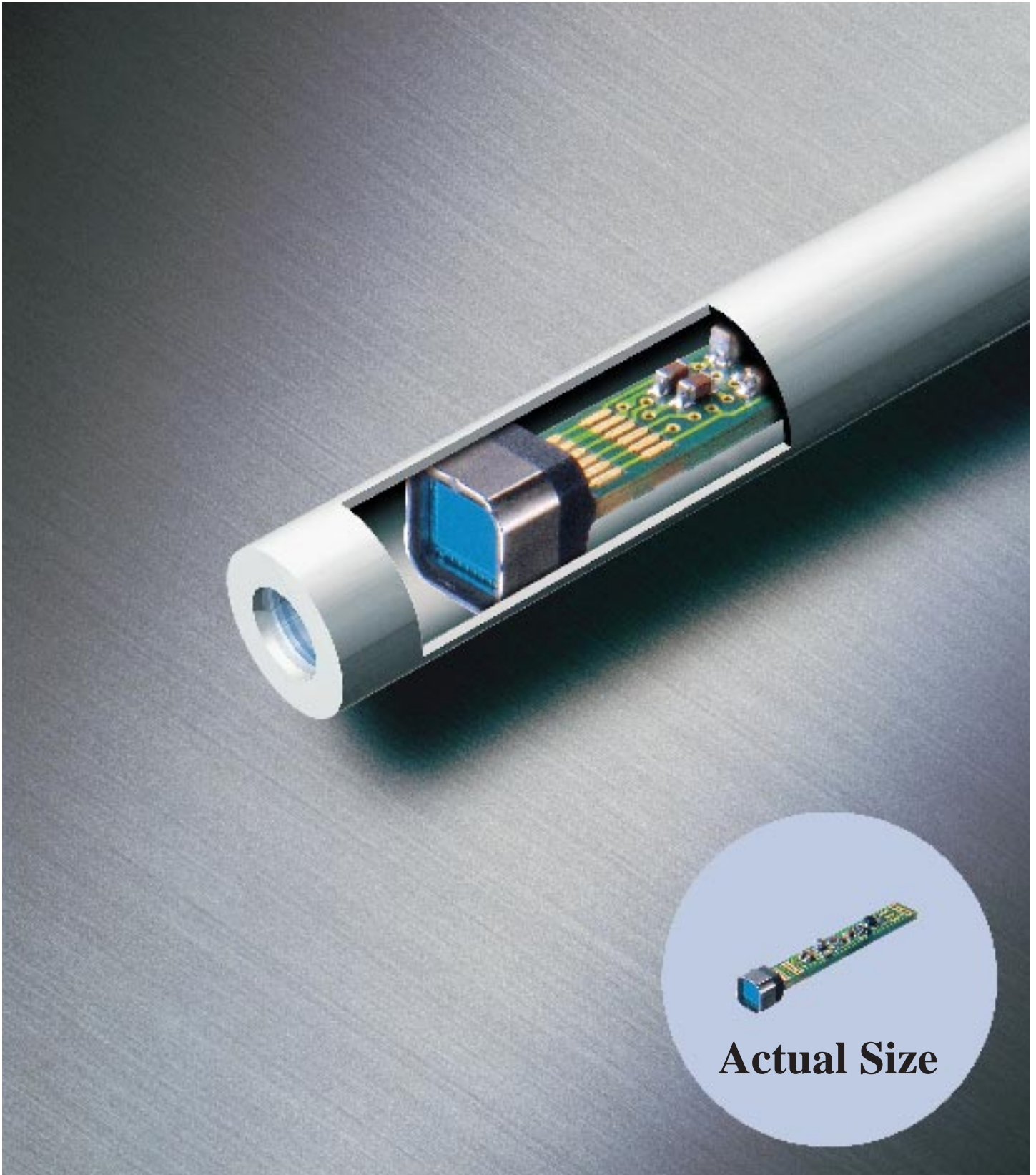


Panasonic®

1/4" CCD Super Micro Camera Module
GP-KS462



A minimum image pick-up device weighing only 1g has recently been released.



As a result, the CCD portion and the circuit board can be separated.

The GP-KS462 is a super-compact camera module. Although it only has a 1/4 inch CCD, the module is still capable of delivering horizontal resolution of 480 lines, and a SN ratio of 50 dB or better. The GP-KS462 camera module has a super-compact head measuring 5.6 mm x 5.6 mm. The extremely small size and high flexibility of this product enables its use in more applications than those usually available to standard sized color cameras.

STRUCTURAL FEATURES OF GP-KS462

1 Reduced Size and Light Weight

The unique micro-assembly technology developed by Panasonic has resulted in an incredibly compact and light product weighing only 1g and measuring 6.7 mm in diameter and 39.3 mm in length. This is a triumph of modern compact design by allowing the module to be placed into extremely hard-to-reach places.

2 Suitable for Curved Scope

It is possible to separate the image pick-up portion of the module from the circuit board to a distance of up to 150 mm. In this way, the camera head module is able to fulfill dual functions.

3 Flexible Installation

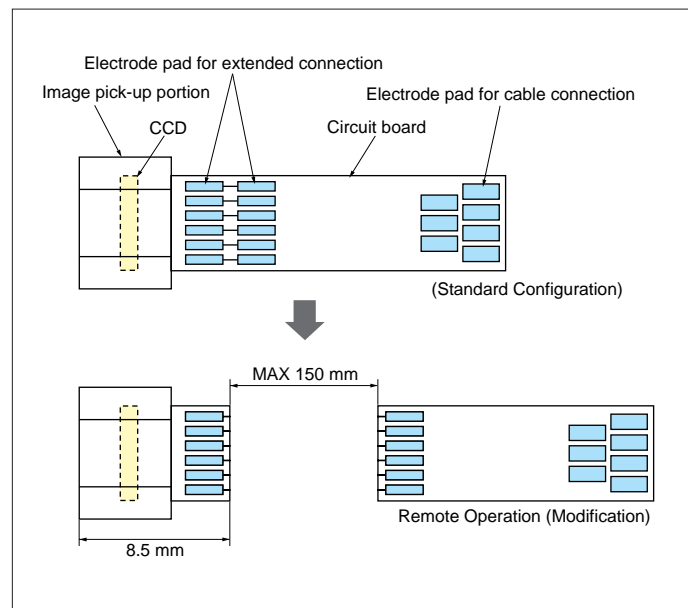
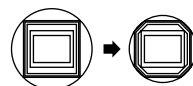
Component parts have been miniaturized to practical limits. The simple design allows the customer to utilize modules within applications requiring smaller video imaging devices.

4 Easy Cable Connection

External electrode pads are provided on the surface of the circuit board. These pads are exclusively for cable connection. As a result, wiring can be accomplished with ease.

5 Octagonal CCD Case

The octagonal CCD metal case realizes smaller diameter and provides four minimum spaces for optical fiber.



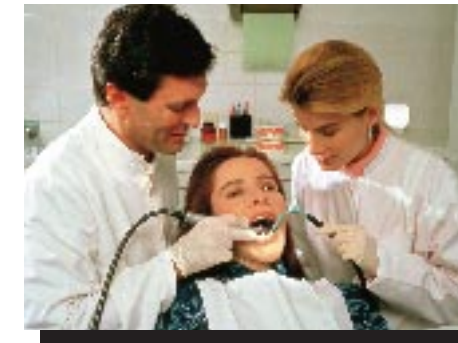
Key Features (When Connected)

- Super Micro Head Module for Endoscope/Dentalscope applications
- Compatible Head Module (100% head interchangeability)
- High Resolution (480 TV Lines)
- RGB Processed DSP
- Auto White Balance
- ELC, AGC, BLC
- EVR Serial Interface
- Easy Key Access
- Single Board Design PCB. (CCU)
- Composite, Y/C Out

APPLICATIONS



■ MEDICAL ■

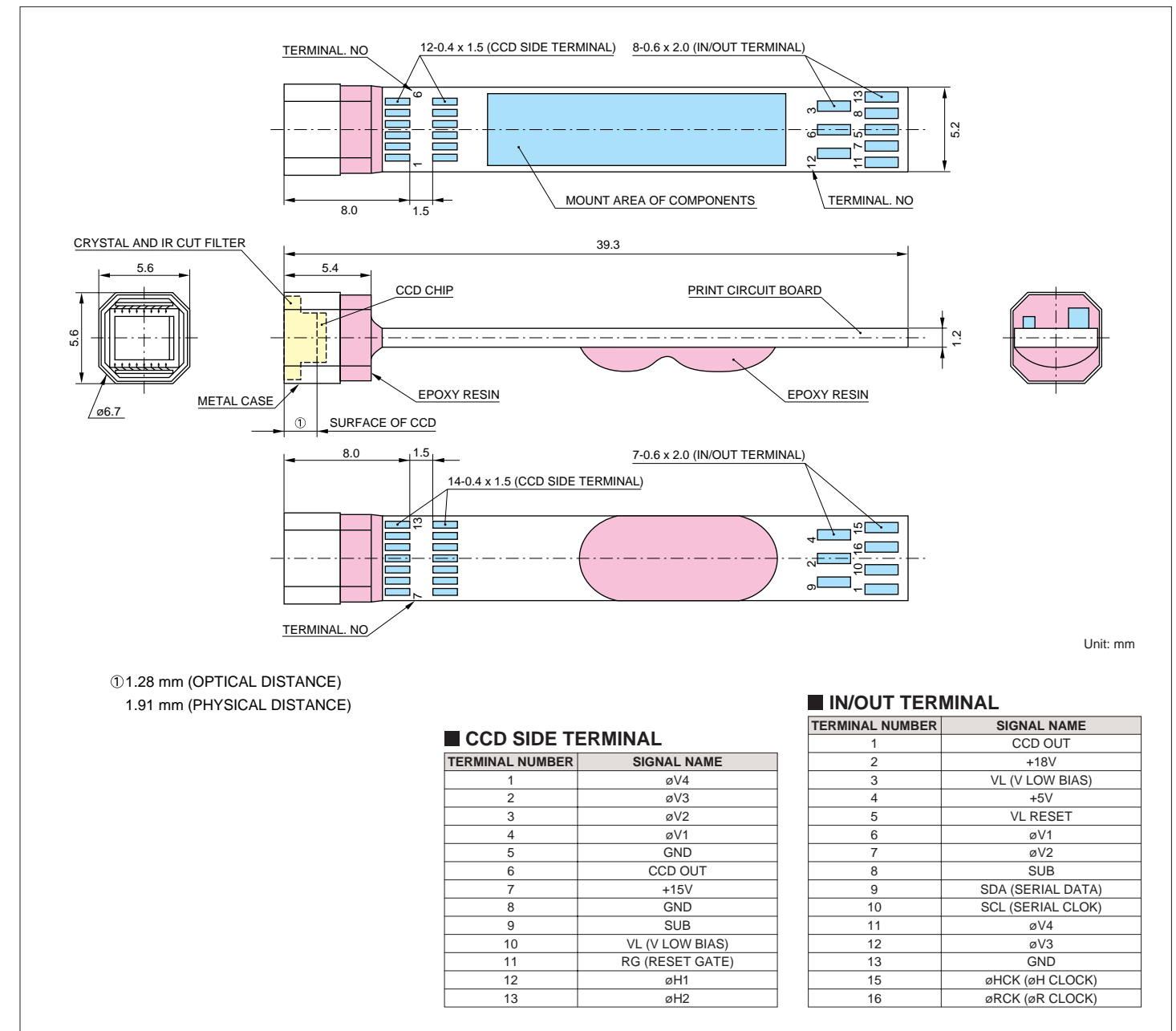


■ DENTAL ■



■ INDUSTRIAL ■

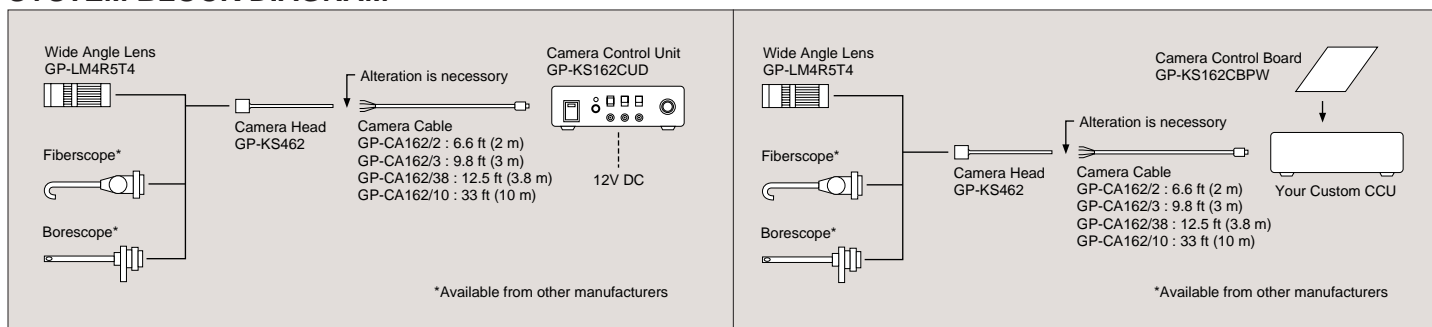
MAJOR OPERATING CONTROLS



SPECIFICATIONS (connected with CCU)

	GP-KS462HM (NTSC)	GP-KS462HME (PAL)
Pick-up Device	1/4" 768 (H) x 494 (V), Interline Transfer CCD	1/4" 752 (H) x 582 (V), Interline Transfer CCD
Scanning Area	3.65 (H) x 2.74 (V) mm	
Scanning System	NTSC, 2:1 Interlace	PAL, 2:1 Interlace
Synchronization	Internal only	
Video Output	1.0 V[p-p] 75 Ω NTSC Composite, Y/C	1.0 V[p-p] 75 Ω PAL Composite, Y/C
Horizontal Resolution	480 TV lines	
S/N Ratio	50 dB [at AGC OFF, Sharp, Weigh ON]	
Minimum Illumination	6 lx, F1.4 (AGC ON)	
White Balance	ATW/AWC/Manual selectable	
AGC	On (approx. 14 dB) /Off selectable	
ELC	On/Off selectable	
Auto Light	On/Off (ELC and AGC) selectable	
Video Level	On/Off selectable	
Aperture	Sharp/Soft selectable	
BLC	Normal/Back Light Control selectable	
Power Source	DC 12 V, 300 mA	
Dimensions (Camera)	2/9" (W) x ø5/19" (H) x 1-5/9" (D)	5.6 (W) x ø6.7 x 39.3 (L) mm
Dimensions (CCU)	4-3/4" (W) x 1-7/16" (H) x 6-3/16" (D)	120 (W) x 36 (H) x 157 (D) mm
Weight (Camera)	Approx. 0.0022 lbs.	Approx. 1.0 g
Weight (CCU)	1.21 lbs.	550 g
Ambient Temperature	Operating: -10°C to +50°C	

SYSTEM BLOCK DIAGRAM



Camera head must be housed in a custom housing or scope.

<p>Camera Control Unit (PCB) GP-KS162CBPW (NTSC) GP-KS162CBEW (PAL)</p> 	<p>Camera Control Unit GP-KS162CUD (NTSC) GP-KS162CUE (PAL)</p> 	<p>Wide Angle Lens for GP-KS462 GP-LM4R5T4</p>  <p>4.5 mm, F1.6 Manual Iris: F1.6 ~ F16 Angle of View: 46°(H) x 34°(V) Dimensions: ø10.5 x 22 mm</p>
---	---	--

- Weights and dimensions are approximate.
- Specifications are subject to change without notice.
- These products may be subject to export control regulations.

Panasonic

Broadcast & Television Systems Company

Division of Matsushita Electric Corporation of America
INDUSTRIAL CAMERA SALES DEPARTMENT

Executive Office: One Panasonic Way 4H-2, Secaucus, New Jersey 07094

Regional Office

Northeast: One Panasonic Way, Secaucus, NJ 07094 (201) 392-4576
 Southeast: 1225 Northbrook Parkway, Suite 1-160, Suwanee, GA 30174 (770) 338-6835
 Midwest: 1707 North Randall Road Elgin, IL 60123 (847) 468-5200
 Southwest: 4500 Amon Carther Blvd, Ft Worth, TX 76155 (817) 685-1041
 Western: 6550 Katella Ave., Cypress, CA 90630 (714) 373-7040

DISTRIBUTED BY:

MATSUSHITA ELECTRIC OF CANADA LIMITED
 5770 Ambler Drive, Mississauga, Ontario, L4W 2T3 Canada (905) 624-5010
PANASONIC SALES COMPANY
DIVISION OF MATSUSHITA ELECTRIC OF PUERTO RICO, INC.
 San Gabriel Industrial Park 65th Infantry Ave. KM. 9.5 Carolina, P.R. 00630 (809) 750-4300

Printed in Japan
 [P-401A]