

CS 3960DCL

B/W PROGRESSIVE
SCAN CCD CAMERA



TECHNICAL DATA

CS 3960DCL

- 2/3" Progressive Scan CCD Image Sensor with square pixel ICX285AL-A
- High resolution 1392 (H) x 1040 (V) SXGA
- High-speed draft readout 100 fps
- Partial scan
- Camera Link interface
- Electronic shutter
- Compact and light weight

APPLICATION

- Machine vision
- Factory automation
- Quality control

CONNECTOR

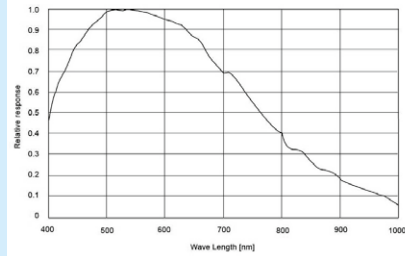
for Power Supply and sync input/output DC IN

- Connector (camera side) HR10A-10R-12PB
- Plug (cable side) HR10A-10P-12S

	CS 3960DCL
IMAGE SENSOR	2/3" interline CCD, Type: ICX285AL-A
Video output pixels	1392 (H) x 1040 (V)
Unit pixel size	6.45 (H) x 6.45 (V) μm (square grid array)
Frame rate	30, 60 or 100 fps
Illumination	standard: 400 lx, F 5.6, 3.000 K, minimum: 4lx (F 1.4) (GAIN MAX, all pixel readout, video level 50 %)
VIDEO OUTPUT	Compliant with the camera link standard
Data	12 / 10 / 8 bit switching
Readout mode	all pixel readout: approximately 30 fps / 1392(H) x 1040(V), partial scan: approximately 60 fps / 1392 (H) x 400 (V) high-speed draft readout: approximately 100 fps / 1392 (H) x 260 (V)
Gain	0 to +12 dB (256 levels)
Setup	approximately -248 to +511 LSB (1 LSB steps)
Gamma correction	OFF (gamma= 1.0) fixed
Power source	DC 12 V \pm 10% (ripple 50 mV (p-p) or less)
Power consumption	approx. 300mA
ELECTRONIC SHUTTER SPEC	
All pixel readout	1/30 to 1/10.000 s
Partial scan	1/60 to 1/10.000 s
High-speed draft readout	1/100 to 1/10.000 s
RTS (Random Trigger Shutter)	ON/OFF switching (initial factory setting: OFF) fixed mode: the exposure time depends on the shutter speed setting, pulse width mode: the exposure time depends on the pulse width.
Multiple-shutter	ON/OFF switching (initial factory setting: OFF) exposure by TRIG input, readout by MULTI input. * enabled when random trigger shutter is ON.
INTERNAL SYNC SIGNAL SPEC	
Driving frequency	57.28 MHz
Scanning frequency	horizontal 32.00 kHz / vertical 30.00 Hz – all pixel readout horizontal 32.00 kHz / vertical 59.59 Hz – partial scan horizontal 26.92 kHz / vertical 100.81 Hz – high-speed draft readout
MECHANICAL SPEC	
External dimension	55mm (W) x 60mm (H) x 63mm (D)
Weight	approx. 190g
Lens mount	C-Mount
Flange back	17.526 mm
OPERATING AMBIENT CONDITION	
Performance assurance	temperature from 0 to 40° C / humidity from 10 to 90 % (no condensation)
Operating assurance	temperature from -5° C to 45° C / humidity 90 % or less (no condensation)

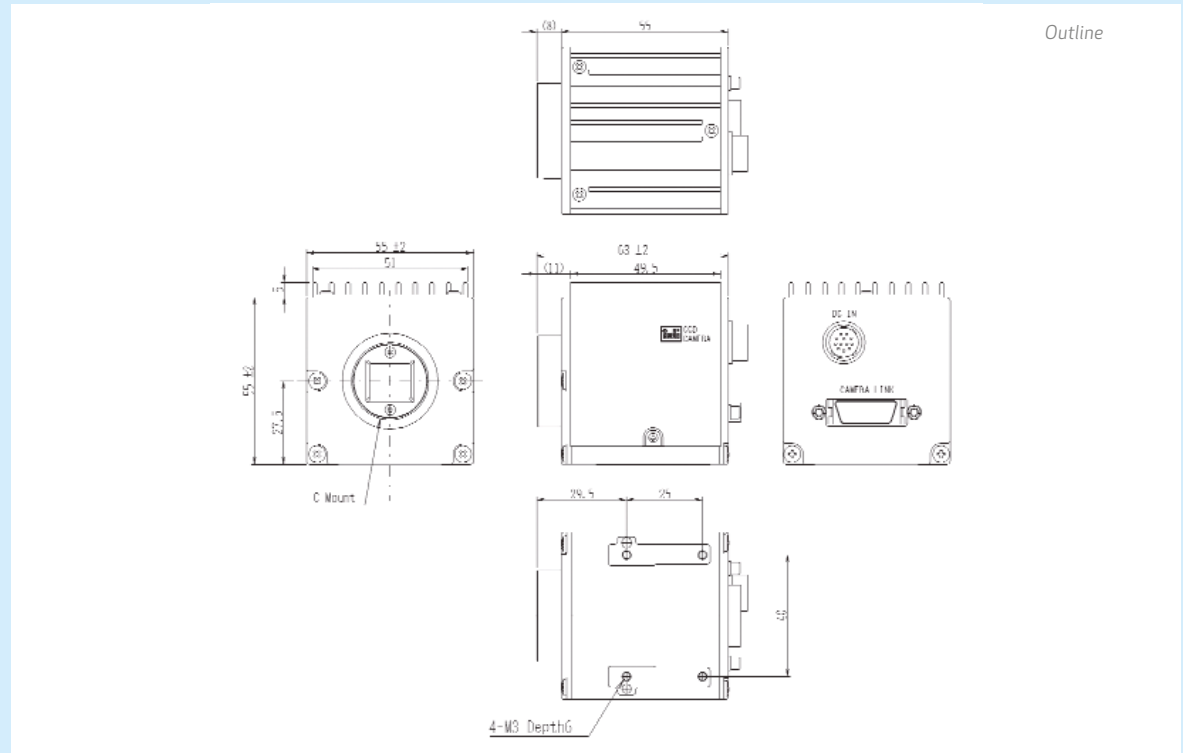
TECHNICAL DATA

CS 3960DCL



Typical spectral response

The lens characteristics and lightsource is not reflected in the table.



Outline

NET New Electronic Technology GmbH
 Lerchenberg 7
 86923 Finning, Germany
 Tel: +49 8806 9234 0
 Fax: +49 8806 9234 77
 info@net-gmbh.com
 www.net-gmbh.com

NET Italia S.r.l.
 Via Carlo Pisacane, 9
 25128 Brescia, Italy
 Tel: +39 030 5237 163
 Fax: +39 030 5033 293
 info@net-italia.it
 www.net-italia.it

NET USA, Inc.
 3037 45th Street
 Highland IN 46322, USA
 Tel: +1 219 934 9042
 Fax: +1 219 934 9047
 info@net-usa-inc.com
 www.net-usa-inc.com

NET Japan Co., Ltd.
 2F Shin-Yokohama 214 Bldg.
 2-14-2 Shin-Yokohama, Kohoku-ku,
 Yokohama-shi, 222-0033, Japan
 Tel: +81 45 478 1020
 Fax: +81 45 476 2423
 info@net-japan.com
 www.net-japan.com