NEWTON

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4180 Imager
4180-IR Imager

High Resolution Industrial Machine Vision
RS170 (NTSC) Color Camera

Specifications	
Format	RS170A (NTSC)
Imaging Sensor	1/3 Inch Color CCD
Effective Picture Elements	768 Horizontal x 494Vertical
Minimum Illumination	.7 Lux
Signal to Noise Ratio	Greater Than 45dB
Sync System	Internal / External (Vision System Controlled)
IR Sensitive	4180 IR - Sensitive 4180 Non - IR Sensitive
White Balance	Adjustable (Vision System Controlled)
Shutter Speed	1/60 to 1/20,000 (Vision System Controlled)
Gain	Adjustable (Vision System Controlled)
Power	12 VDC @ 350mA
Lens Mount	C / CS Mount
Weight	12.5 oz (354 grams)
Operating Environment	-5 Degrees C to +45 Degrees C
Minimum-Maximum Storage Environment	-20 degrees C to +70 Degrees C
Color Adjustments	Vision System Controlled
Optional Lens Iris Control	Vision System Controlled
Connections	Newton Labs Imager Cable
Focus	Unique back focus adjustment from both front and rear of camera

All adjustable Imager functions are designed to be controlled by a Newton Labs Vision System. Consult the Newton Labs Software Component User guide for the details of the available Imager adjustments in your specific application.

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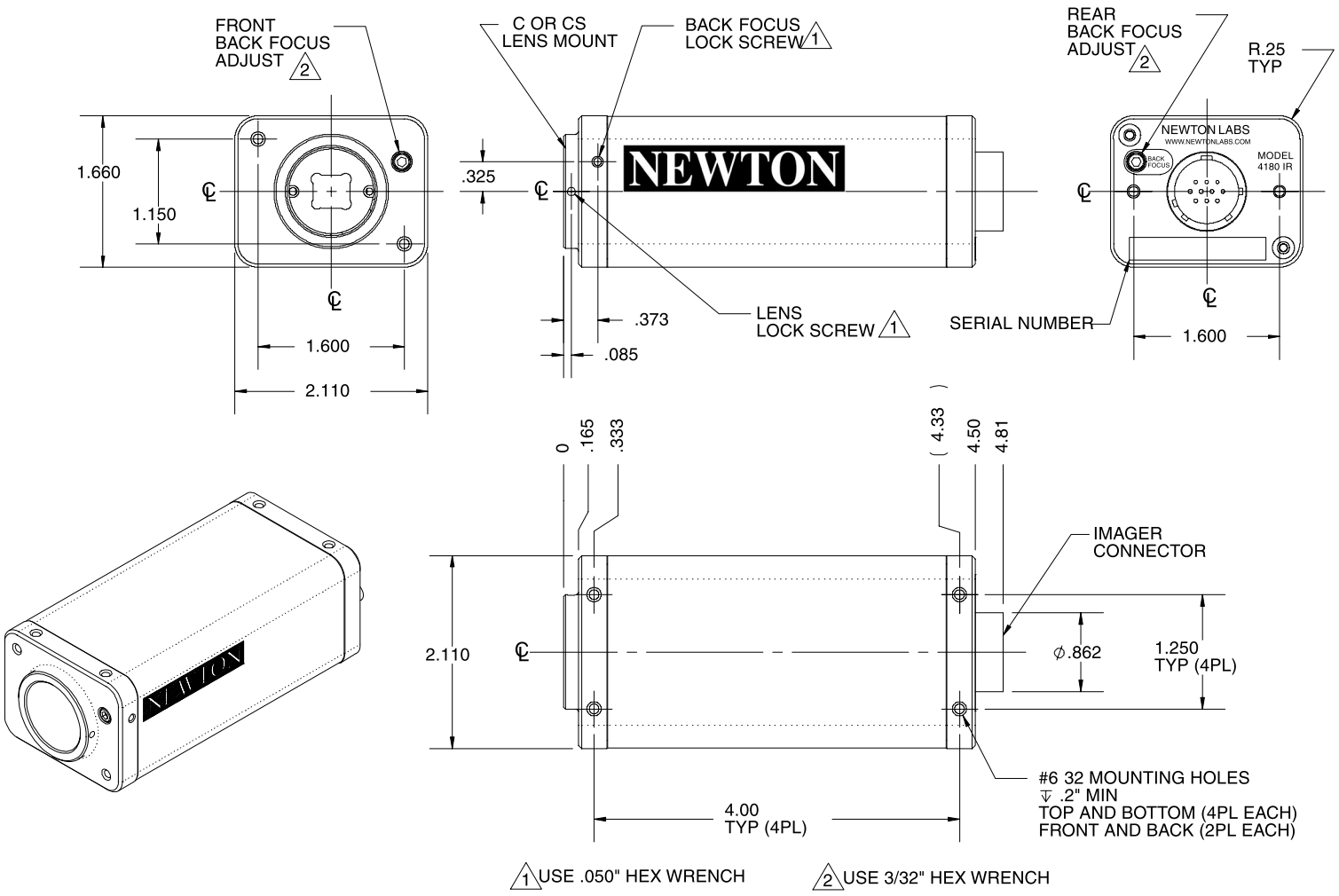
Mechanical Specifications



The 4180 and 4180-IR Imagers accommodate both C and CS Mount lenses.

How to install a Lens and adjust the Back-Focus

- **Loosen the Lens Lock Screw**
- **Loosen the Back-Focus Lock Screw**
- **Install or replace Lens (see *important note below)**
- **Tighten Lens Lock Screw**
- **Rotate either the Front or the Rear Back-Focus Adjustment Screw to the desired position.**
- **Retighten the Back-Focus Lock Screw.**
- **For applications with fixed focal length lenses, use the Back-Focus Adjustment feature to adjust the focus.**
- **For lenses with an adjustable focus, the imager Back-Focus Adjustment is properly set when image clarity is achieved with the lens focus at the mid point of its adjustment range.**
- **If the focus range on an adjustable focus lens is not adequate, additional focal range may be available with the Back-Focus Adjustment feature.**

***IMPORTANT NOTE:** It is possible for some lenses to contact and damage internal camera components if the Back-Focus Adjustment mechanism is not set to the proper range for the lens. To prevent this, before installing any new lens:

- Rotate the FORWARD Back-Focus Adjustment Screw COUNTER-CLOCKWISE to its limit of travel.

-or-

- Rotate the REAR Back-Focus Adjustment Screw CLOCKWISE to its limit of travel.

Excessive Back-Focus Adjustment can bring internal camera components in contact with some lenses. Be sure to note the distance the lens extends inside the camera prior to large changes in Back-Focus Adjustment.