

# OptiTek's Optimator

Designed by discriminating professionals for the discriminating professional.

Optimator is a high precision instrument that, regardless of environmental conditions assures precise sensor location (camera back focus, sensor flange depth) checking and adjustment.



## The purpose of this instrument

- Check the Flange depth of the sensor
- The max resolved number can be recorded(written down) for future reference
- Generate reference frame
- Check camera real resolution
- Check camera light sensitivity
- Make all tests identical, "laboratory condition" compliant regardless of location
- Communicate sensor issues remotely by emailing reference frame grabs
- Create sensor test standards that all digital cameras can be tested to.

## Design/Build features:

1. Modular design allows for adding feature modules after purchasing the base unit. The upgrade price is based on price difference plus labor cost.

2. Stainless Steel optics housing construction to minimize thermal expansion issues. This feature assures stable performance in diverse environments (extremely hot or cold conditions)
3. Precision ground stainless mount adapters. This feature allows for quick remounting for various camera mounting systems(PL, Panavision, Nikon, etc.)Precision grinding assures instrument quality tolerances so Optimator maintains accuracy that surpasses several times what is required by any camera manufacturer.
4. High resolution optics capable of resolving in excess of 5000 lines per inch– several times more than any camera specs. And necessary, in our opinion, to achieve test instrument quality. The focal length and speed (efficient light transmission) assure easy and accurate resolution reading. The extremely flat field displays whole frame accurately and makes sensor tilt easy to see. The coverage area is 34mm– exceeds 5K sensor area. This feature allows viewing of the entire sensor and quickly detecting issues on and off axis.
5. High resolution full frame reticule– precisely centered and parallel. The highest resolution target has calibrated 2000 LPH(lines per height). This feature allows easily determining the maximum resolution resolved and using it for adjustment reference and communication. The full frame reticule with high resolution targets in corners makes any sensor tilt evident and the center target helps to detect sensor centering problems.  
*Custom reticule patterns with even higher resolution are available.*
6. White LED backlight with instrument precision circuitry, light intensity adjustment, built-in rechargeable battery and on-board battery charger. This feature has very low power draw that will make the batteries last for days. The LED power supply is very stable and precisely calibrated to assure identical light intensity on each step and on each Optimator. The built in batteries are rechargeable and make this unit a stand-alone device. The built in charger circuitry allows for charging the on-board battery from 7V–30V source. We supply a d-tap cable to plug into IDX/ AB battery for charging. There also is a blinking LED to indicate that the unit is on so the user can't forget to turn it off before putting the

Optimator away.

## Roadmap (Upcoming Accessories)

1. Micrometer module to easily determine shim size for cameras with no back focus adjustment built in( proto unit pictured has it installed)
2. RGB backlight module to test each channel individually.
3. Replaceable reticule module that allows for quick swap for custom or special purpose reticules.
4. Custom reticules including color, MTF, single channel options.
5. Software bundle to easily evaluate camera performance based on reference frame grabs.