

## TIFFEN SERIES OF IR CONTROLLING FILTERS

- Full Spectrum IR ND
- T 1/2 & T1
- Hot Mirror
- Hot Mirror IR
- Hot Mirror IR ND
- 80C Hot Mirror
- 80D Hot Mirror

These filters are made from optically pure Water White glass and manufactured to the highest standards using a proprietary lamination process that grinds and polishes both surfaces to achieve perfect parallelism. For the cinematographer, this means absolute consistency and worry free handling.

These filters are available in popular motion picture sizes and other sizes are available upon request. The Full Spectrum IR ND and Hot Mirror IR ND filters are available in 0.3, 0.6, 0.9, 1.2, 1.5, 1.8 and 2.1 densities. Please refer to individual filter technical sheets for more detailed information or visit our website at [www.tiffen.com](http://www.tiffen.com).

Tiffen Full Spectrum IR ND and T1 are also available in 72, 77 & 82mm (thin profile wide angle ring).

The T Series filters are available in the new Far Red Control Kit, size 4x5.65.

## HD CAMERA FILTER CHART

CAMERA	FILTER
RED ONE®	Hot Mirror
RED EPIC®	Hot Mirror IR
SI2K	Hot Mirror IRND
PHANTOM Flex	Full Spectrum IRND (use in combination with Hot Mirror.)
PHANTOM HD Gold	80CHM 80DHM
Sony EX1/EX3/EX1R	T 1/2 & T1 (available individually or in the Far Red Control Kit)
Sony PMW-350	Full Spectrum IR ND (includes Indie Filter Kit Series, available now)
Sony F3	
Sony SWR-9000	
Sony F23/F35	
Panavision Genesis	
ARRI ALEXA	
ARRI D-20	
ARRI D-21	
Weisscam	

*NOTE: All Tiffen combination filters are extremely useful in a two stage Matte Box/Sunshade, when space is a premium. We recommend to always white balance after adding or removing any IR or Neutral Density filtration due to color shifts. The Tiffen Hot Mirror, Hot Mirror combination and T Series filters do not cause color vignetting on wide lenses. The Tiffen Full Spectrum IRND and Hot Mirror IRND filters are available in 0.3, 0.6, 0.9, 1.2, 1.5, 1.8 and 2.1 densities.*

*All IR solution filters are made from water white glass using proprietary ColorCore™ technology.*



The Tiffen Company

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# TIFFEN®

## IR POLLUTION

NEW For 2011

IR SOLUTION

# IR CONTROL FILTERS

The Difference is **TIFFEN**

# THE ULTIMATE IN IR CONTROL

## TIFFEN DIGITAL IR FILTERS

IR contamination is significant issue in many of today's hi-definition cameras. The degree of contamination is dependent upon the camera's sensor – CCD or CMOS – and whether or not the camera has an internal IR blocker. These sensors are made from silicon, which is inherently sensitive to far red and infrared. This IR pollution has an adverse effect on the quality and color rendition of the images – stealing contrast and color, resulting in unwanted color shifts. Greens become reddish muddy brown and blacks have a magenta hue. In addition, infrared has a different focal length than visible light; therefore, your images can also appear out of focus.

To combat this problem, Tiffen's Academy Award-winning ColorCore® filter technology has responded to the needs of the profession digital videographers and cinematographers by creating an exclusive line of innovative IR controlling filters. All filters are made using cutting-edge technology and a proprietary manufacturing process. The Tiffen Series of IR Controlling filters are tailored to meet requirements in eliminating the effects of Far Red and IR pollution over a wide range of professional camera platforms and shooting situations. Achieving optimum color accuracy and unsurpassed color performance that meets the highest professional standards is Tiffen's goal.

## TIFFEN FULL SPECTRUM IR ND FILTERS

Tiffen Full Spectrum IR ND Filters are designed to overcome two of the main problems encountered with digital imaging sensors – their sensitivity in low light conditions which can lead to overexposure in brightly lit situations, and their sensitivity to infrared.

Traditional ND filters cause a spike in the near infrared when used with cameras incorporating an internal IR blocking filter (e.g. Sony, ARRI Alexa and Panavision Genesis). To correct these issues, Tiffen pioneered Full Spectrum IR ND filters. These filters provide true neutral density into the IR spectrum, thus allowing the use of heavier grades of Neutral Density needed for many high

definition video cameras, while simultaneously maintaining optimum color balance.

## TIFFEN T SERIES FILTERS

The T1 and the NEW T 1/2 filters are designed to optimize the functioning of high performance digital cameras with a much wider color gamut and enhanced red response (e.g. ARRI Alexa, Sony EX Series) while eliminating Far Red/Near Infrared contamination that can appear in fabrics containing certain industrial dyes. With the T 1/2 or T1 filter in place, capturing subtle red hues is effortless, and the camera can deliver the crisp blacks and wide color gamut it was designed for, with minimal light loss. Both filters now available in the Far Red Control Kit.

## TIFFEN HOT MIRROR AND HOT MIRROR IR ND FILTERS

These innovative filters address the problem of IR pollution in HD digital cameras that do not incorporate a built-in IR blocker. The Tiffen Hot Mirror (HM) filter is a stand-alone filter that effectively blocks only the IR portion of the spectrum with no appreciable loss of light transmission.

The Tiffen Hot Mirror IR ND (HMIRND) Combination filter provides the complete solution to IR control in both the Near IR and Far IR regions of the spectrum, and has matched IR and ND components to assure accurate color reproduction and exposure in the critical near infrared region.

## TIFFEN 80C HOT MIRROR AND 80D HOT MIRROR FILTERS

The Tiffen 80C Hot Mirror and 80D Hot Mirror filters are the first combination filters on the market that address both the color temperature and IR pollution problems associated with the popular RED ONE™ camera. Because this camera lacks an internal IR blocker, it is especially susceptible to the adverse effects of IR pollution—compromised color rendition, loss of color saturation, and unwanted color shifts. And while the RED ONE™ can capture beautiful high quality images at its standard daylight color setting (5000K), it is challenged in tungsten light (3400k or 3200K). Using the Tiffen 80C Hot Mirror or 80D Hot Mirror provides exceptional color reproduction along with minimal light loss—only 1 stop with the 80C, and a mere 1/3 stop with the 80D.

