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2/6/2024

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Motivation

- Contrast control
 - High contrast → 'hard' light (bright highlights and dark shadows)
 - More dramatic
 - Good for landscapes
 - Good for B&W photography
 - ▶ Good for 'intense' portraiture → emphasizes wrinkles and 'cragginess'





Motivation

Contrast control

Note: The beetle photo may not seem to be low contrast, but beetles can have very shiny exteriors, and normally there are very bright highlights unless the lighting is carefully controlled.

- Low contrast → 'soft' light (diffused light, no harsh shadows)
 - Less dramatic
 - Good for macro to reduce bright reflections (especially insect eyes)
 - Good for vlogging (video blogging)
 - ► Good for 'smooth' portraiture → more flattering for women's faces

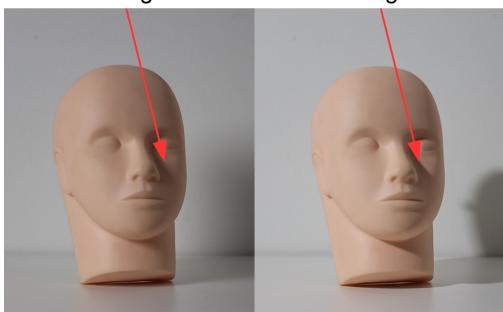




Contrast control

- High contrast
 - Well defined light source(s)
 - ightharpoonup Small in relation to the subject size \rightarrow the sun is a small light source
 - Single source produces the sharpest shadows → direct sunlight
 - Multiple sources can reduce contrast (a reflector is an additional source)

shadow edge softer shadow edge harder



larger source = softer smaller source = harder



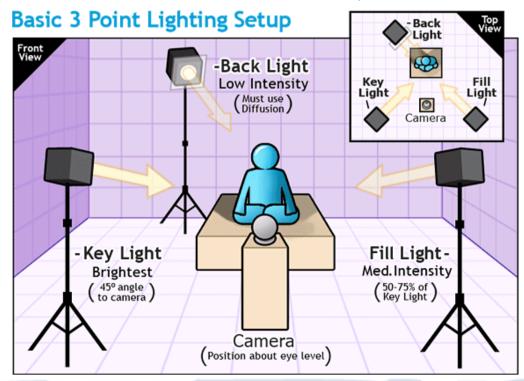
single source



reflector added

Contrast control

- High contrast
 - Well defined light source(s)
 - > Small in relation to the subject size → the sun is a small light source
 - Single source produces the sharpest shadows → direct sunlight
 - Multiple sources can reduce contrast (a reflector is an additional source)



Contrast control

Note: An overcast day may be too low contrast for portraits → use a reflector to add additional light to the subject.

- Low contrast
 - Illumination arriving from all directions
 - Overcast day, bounce flash → large illumination area



hot spots



overcast sky → low contrast

direct flash → high contrast

bounce flash → lower contrast

Contrast control

- Low contrast
 - Illumination arriving from all directions
 - ➤ Overcast day → light source is entire sky, minimal shadows
 - ➤ Ring light → light from many directions (if not smaller than subject)





normal light, left \rightarrow uneven illumination ring light \rightarrow even illumination

Contrast control

Low contrast

Note: Portrait lighting usually features a light gradient across the face, but in some cases a lower contrast may be preferred (especially for vlogging, where the subject may move).

- Illumination arriving from all directions
 - ➤ Overcast day → light source is entire sky, minimal shadows
 - ► Ring light → light from many directions (if not smaller than subject)







normal lighting → uneven illumination

ring light → even illumination

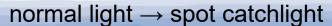
Contrast control

Note: Ring lights produce a circular catchlight, which many photographers like (catchlights are the bright spots in the eyes of a subject).

- Low contrast
 - Illumination arriving from all directions
 - ➤ Overcast day → light source is entire sky, minimal shadows
 - ➤ Ring light → light from many directions (if not smaller than subject)









ring light → circular catchlight

Contrast control

Note: Light tents are available in different sizes, from 10.5" x 10.5" x 13.5" to 48" x 48" x 48".

- Low contrast
 - Illumination arriving from all directions
 - ▶ Overcast day → light source is entire sky, minimal shadows
 - ➤ Ring light → light from many directions (if not smaller than subject)
 - ➤ Light tent → subject in illuminated enclosure (minimizes shadows)



light tent with external light sources

Ring lights

- Types
 - Macro lights
 - > Smaller ring, usually mounts to lens filter threads
 - Portrait lights
 - Larger ring, usually mounts to a light stand or table stand





Note: Most circular macro flashes have two

semicircular tubes on the left and right of the

flash head → they can often be controlled

independently for more lighting flexibility.

Ring lights

- Macro lights
 - Flash units
 - Some of the earliest ring lights
 - Circular flash tubes, or multiple circular segments
 - \triangleright Can still get them today \rightarrow some TTL, others manual flash







Sunpak GXR8, \$29 (used)

Godox MF-R76, \$179

looks like one

Ring lights

- Macro lights
 - Continuous units
- Note: The Godox RING48 can be powered by batteries or the included AC adapter. The Bolt VM-110 is powered by batteries only, includes 4 clip-on diffusers, and can power on when the shutter button is depressed to save power (not a flash).
- Multiple LEDs arranged in a ring → more LEDs = more light
- > Much less light than flash units, but can be easier to work with
- Some have brightness controls
- > Some can adjust brightness of different parts of the ring





Godox RING48, \$38 (67mm max thread)

Bolt VM-110, \$50 (77mm max thread)

Ring lights

- Macro lights
 - Hybrid units
 - Flash tube(s) + continuous light (may be only a modeling light)
 - Can choose which type of light to use





Note: A modeling light is a continuous light used with

power is much lower than the flash itself.

flashes which allows the photographer to see the

effect of the light prior to using the flash. The

Ring lights

Portrait lights

Note: The Interfit triple fluorescent ring unit has 7", 10", and 14" tubes. It comes with a fabric diffuser to create a wide ring when all tubes are lit. Also includes a camera mount.

- Fluorescent → watch the CRI (Color Rendering Index), 90+
 - Circular tubes
 - Need to be significantly larger than macro lights (subject is much larger)
 - > Can shoot through the ring or outside the ring
 - > Single and multiple tube models





Ring lights

- Portrait lights (includes vlogging lights)
 - LED → make sure the CRI is high, at least 90
 - Many LEDs arranged in a ring, most common type today
 - > Need to be significantly larger than macro lights for portraits
 - > Can shoot through the ring or outside the ring
 - > Single rings only, I haven't seen any multiple ring LED units





Light tents

Note: Translucent clamshell tents can be used with interior or exterior lights.

- Types
 - Translucent
 - White fabric with external lights, or semi-rigid foldable clamshell
 - > Lights can be positioned for best effect (farther away for more even lighting)



Impact (18" x 18" x 27.5"), \$60



Orangemonkie Foldio 3 (25", with lights), \$131

Light tents

- Types
 - Translucent
 - White fabric with external lights
 - Lights can be positioned for best effect (farther away for more even lighting)

Note: Godox reflective light tents have a built in

diffuser, which helps make the light more even.

shooting straight down. Even with the diffuser

the LED strips can produce specular highlights.

However, the diffuser cannot be used for

- Reflective
 - Silver interior with internal lights (often multiple LED strips)
 - Some models allow individual control of the light strips



LED strips





Godox LST60 (23.6" x 23.6" x 23.6"), \$79 - also in 15.7" and 31.5" models

Light tents

- Uses
 - Product photography
 - Jewelry photography
 - Food photography
 - Flower photography

Note: Some light tents come with paper or fabric 'sweeps', which are used as shooting surfaces and curved to form backgrounds.







homemade light tent for food

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