

Setting Up Your Camera for Product Photography

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The Cubelite lighting solutions have been developed to give you control of all the key aspects of lighting and help you to take professional looking product shots time after time, even if you have little or no photographic knowledge. This guide is to help you get started but is no substitute for getting to know your own camera very well.

The guiding principle for better product shots is to avoid 'Auto' settings as much as possible, an important factor if you have a choice of camera is one that has a Manual setting. Camera operation varies from model to model, so the handbook for your camera is the first port of call.

Turn camera to Manual (M).

We need to take advantage of the maximum depth-of-field that any camera has to offer. The camera should be set to manual so that the smallest aperture setting can be selected. "Aperture priority" is a semi-automatic mode where a manual aperture can be selected and the camera will automatically adjust the shutter speed for the lighting conditions. The second thing we need to do is to focus the lens to get an image as clear as possible. Most digital cameras have an auto-focus option which can be used.

Check your manual to see how to place your camera into these modes and how to set the *f* stop (Aperture).

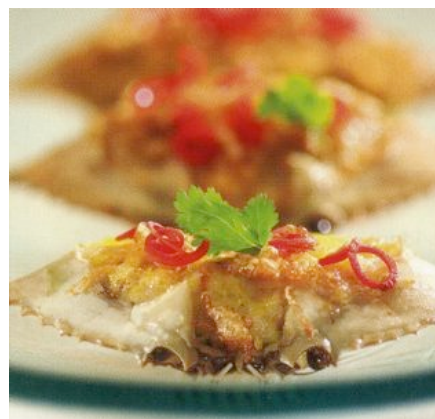
Aperture and Depth of Field

In product photography there is a good reason for wanting to vary the aperture, apart from its effect on exposure, and that is depth of field. This determines how much of the subject is sharply focused. Whichever part of a scene you focus on, the foreground will be less sharp and the background also less sharp. To what extent the sharpness falls off depends on the depth of the scene. A book lying flat and photographed at a normal oblique angle has more depth than if it were standing and flat-on to the camera. But the overall sharpness in the image can be increased by making the lens aperture smaller (in the same way as squinting does for the eye). There may be occasions when you actively want a blurred foreground and background, but the default, particularly for clear, simple product shots and other product images, is sharp throughout.

By choosing the highest aperture setting you can, probably around *f*8 for compact point-and-shoot cameras and *f*16 / *f*32 for SLR models, you will maximise the depth of field in your shot and you will keep your entire product in focus.



For most objects, front-to-back sharpness is the ideal, and this calls for a small aperture, in this example *f*32.



Sometimes, however, you may want to emphasise just a small part and allow the rest to blur into a wash of colour, as in this food shot at *f*2.8.

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Optical zoom

We recommend that you use only your camera's optical zoom which maintains the quality of your photos, rather than using your camera's digital zoom which greatly reduces image quality. You can tell if your camera has a basic optical zoom feature by pushing the zoom button and seeing if the lens actually moves in and out. If not, then the camera is using digital zoom. Optical zooms vary depending on your digital camera, although most point-and-shoot cameras have a 3X to 6X optical zoom. If you zoom-in too closely, you might not be able to focus the item you are trying to photograph.

Turn your flash off

Using a flash would defeat the purpose of using the light tent and it's high specification white diffusing material. Keep your images free of glare by making sure your flash is turned off.

Set ISO to 100

This is the film speed equivalent setting and on point-and-shoot cameras shouldn't go above 100 as the pictures may get a grainy look to them.

SLR cameras should also be set at 100, although if necessary you can go up to 400, you shouldn't ever need to go above 400.

Set Metering Mode to Centre Weighted

Many cameras offer multiple ways of metering a scene. The proper one to choose when shooting in this sort of lighting solution is Centre Weighted. In this mode the camera evaluates the area directly around the point of focus in determining how to adjust the shutter speed.

White Balance or Custom White Balance your camera

This setting tells your camera what lighting conditions you are shooting in, so that it can capture your subject in its natural colours. Please consult your camera manual to establish what options your camera offers and how to change them. Most cameras normally have a choice of settings. They may include: Auto, Daylight, Cloudy, Tungsten light, Fluorescent light, Custom White Balance.

If for instance you are using a tungsten light (3200°K) for your photography and, you have a 'Tungsten' setting, use this one. If you have a 'manual evaluative' setting this will be even more accurate as it measures your actual lighting conditions rather than using a default reference. Finally if you do not have either the 'tungsten' or 'manual evaluative' settings we recommend that you use the cameras 'Auto' setting.

This image shows how the 'White balance' settings may appear on your cameras menu system.



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These images show how different the image may look using different settings for 'White balance'



Daylight



Daylight Fluorescent



Fluorescent



Tungsten

If you are having problems getting pure whites and accurate colours, and your camera has the facility for it, you can carry out a Custom White Balance. The Ezybalance or other Greycard options are designed for this purpose.

Check your camera manual on how to set and use a custom white balance.

Select Custom White Balance. Some manufacturers call this preset, evaluative or measured white balance, but everyone uses the same icon which looks like this.



Place your product for photographing and then position the Ezybalance or other Greycard so that there is no direct light on it and ensuring that it is in the same plane as the product to be photographed. Point the camera so that the viewfinder is filled only with the Ezybalance or Graycard, frame the card so that only the interior of it is showing in your lens (not the black tape border) and then follow your camera instructions for saving this setting.

Remember to rebalance each time the lighting circumstances change.

If your camera doesn't support a Custom White Balance you may have to turn off or reduce, as much as possible, any light that isn't tungsten, or halogen based, and that would include daylight. This should help you to shoot your images with whiter backgrounds.

Exposure Compensation

A well-exposed photograph has its darkest shadows almost black and its brightest highlights almost pure white, while the most important areas of the picture are close to average in brightness. This is a sweeping generalisation, but holds true more often than not. Because product photography often has very non-average tones (such as a white background or a black background), and your cameras automated attempts at setting exposure may be fooled. If the image is overall light, it will need more exposure than average; if the overall view is dark, it will need less exposure. If you can set your camera to Manual, you can make these adjustments easily with Aperture a Shutter Speed settings, and if you have a digital camera you can check the results immediately and re-adjust if necessary.

If however, your image seems underexposed (dark) or overexposed (white) you may be able to alter the exposure if your camera has a manual override setting. Please consult your camera manual to

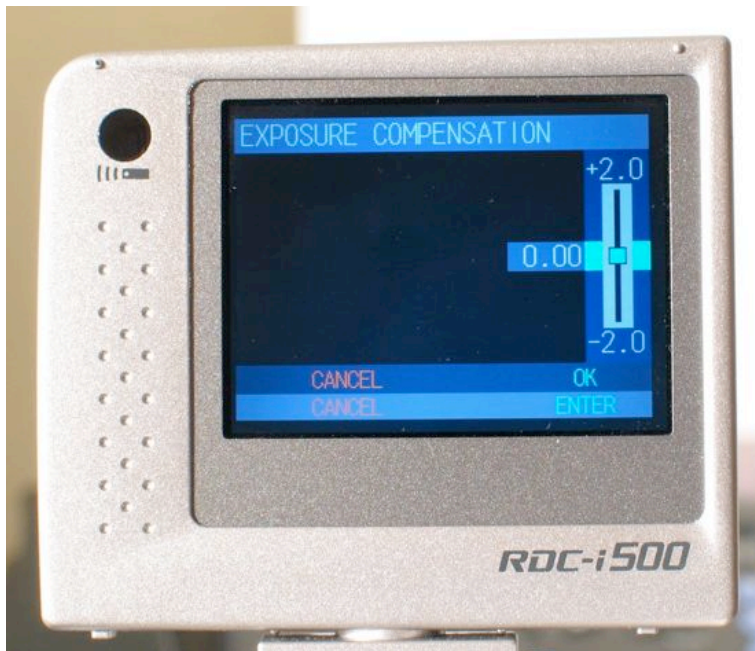
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confirm this. Most digital cameras have fairly easy-to-access exposure compensation controls (labelled as "EV" for Exposure Value). If your background material is white but appears grey in your

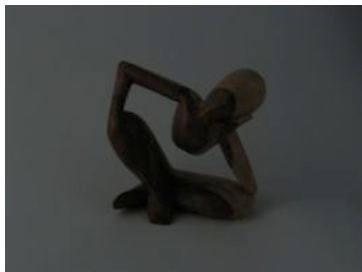
image or if the image is darker than you would like, the image has been underexposed, probably because the camera's auto exposure mechanism has set the exposure too low. Try adjusting the exposure compensation, most cameras offer a compensation range of +2.0 to -2.0 in steps of 0.3. A setting of +1 is a good place to start if you are photographing against a white background. If you end up setting the EV too high, the image will appear burnt away. Simply go back an increment or two until the exposure looks right.

We recommend that you take a number of shots of the same subject each with a different exposure setting, to establish which gives you your desired effect.

This image shows how the 'Exposure Compensation' settings may appear on your cameras menu system.



These images show how different the image may look using different settings for 'Exposure Compensation'



EV setting of -2



EV setting of -1

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EV setting of +1



EV setting of +2

Pixels, resolution and image size

In digital photography, the quality of the detail in an image depends on the number of pixels recorded by the sensor. 'Pixel' stands for 'picture element' and is the smallest unit of an image; each pixel is recorded by each individual photo-site on the sensor. A 6-megapixel camera, for instance, records 6 million pixels; depending on the proportions of the sensor, this means something like 3 million pixels across the longer side by 2 million across the shorter. Resolution is slightly different, though related. A typical computer monitor has its pixels spaced at about 72 per inch, and so has a resolution of 72 ppi (pixels per inch). High quality printing on paper, however, needs a much higher resolution of around 300 dpi (dots per inch, which to all intents and purposes are the same as pixels per inch). These are the two main resolution figures dealt with in digital photography. Clearly, it takes fewer pixels to fill a computer screen than to fill the same size of paper. As a rough guide, to fill a 15-inch screen (the measurement is diagonal) would take 600,000 pixels — much less than one megapixel. To fill an A4 sheet of paper (slightly smaller than the screen) would need a little over 8 megapixels.

Adjust your file size to "L" (Large) and the resolution to "Superfine". This will give you a good file size and resolution for most of your applications.

Once you have completed these set up steps you will have your camera ready for use every time you want to photograph (while using the same lighting type).

For more information
go to www.cubelite.co.uk
or phone 01494 583005