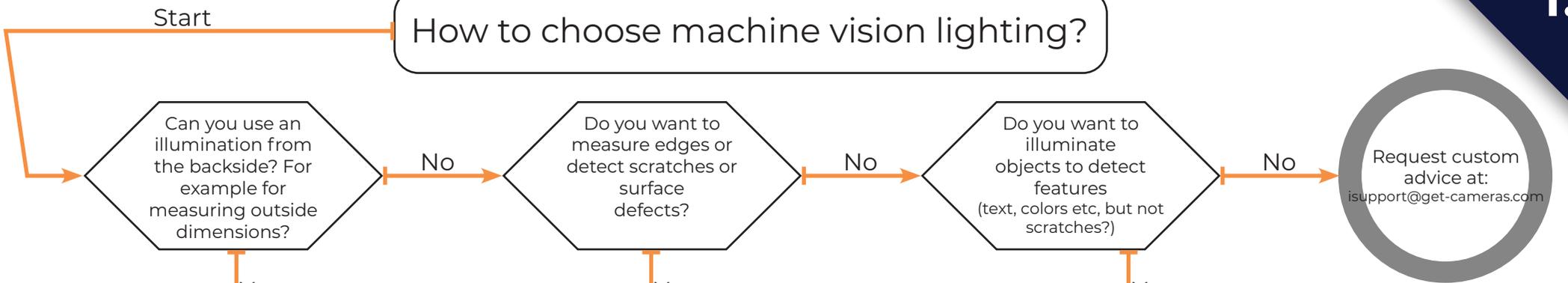


How to choose machine vision lighting?



BOTTOM LIT BACKLIGHT

Camera Setup Image of a coin

LEDI-FL serie. Backlight emitting area should be at least 10mm larger than field of view camera. So if FOV = 30x40mm take backlight of 50x50mm

100MM, White, 24V / 20W, LEDI-FL-100x100W
€286 Price per unit

RINGLIGHT (DARK-FIELD)

Camera Setup Image of a coin

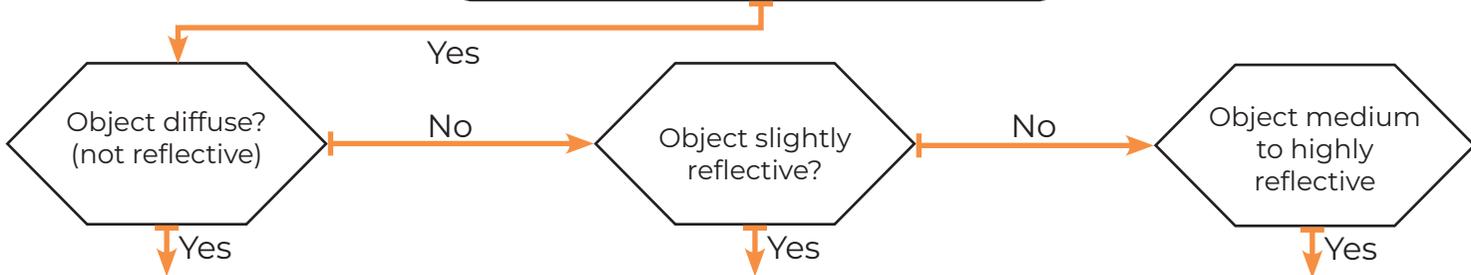
Ringlights Darkfield LED1-RL (dark-Field) serie or 2 - 4 led bars in a low angle
 LEDI-BLM series. For initial test 2 standard led bars or a Dark Field

90MM, White, 24V / 5,5W, LED1-RL-96x00W
€214 Price per unit

Object flat?
see page 2

Object not flat?
see page 3

Object Flat:



Option 1: Ringlight (bright-field)
Reason: This is the easiest solution
Left testchart in test image

Option 2: 2 or 4 barlights
Reason: Cheaper at large objects
Left testchart in test image (in this test image is only one barlight used)

Option 1: Ringlight (diffuse flat bright-field)
Reason: Easy mounting
White plastic foil in test image

Option 2: 2 or 4 barlights
Reason: cheaper at large objects, needs more finetuning, end result can be better
White plastic foil in test image

Option 1: Dome light (relief on product is less visible, chance on dark spot in the middle)
Reason:
Right test chart in test image

Option 2: Coaxial light (relief on product is visible)
Reason:
Right test chart in test image

RING LIGHT (BRIGHT-FIELD)

Camera
Lens
Light
Workpiece

90MM, White, 24V / 9W, LED1-RL-90x70W
€204 Price per unit

BAR LIGHT

Camera
Lens
Light
Workpiece

119MM, White, 24V / 4,5W, LED1-BL-119x16W
€204 Price per unit

RING LIGHT (DIFFUSE FLAT BRIGHT-FIELD)

Camera
Lens
Light
Workpiece

100MM, White, 24V / 8,6W, LED1-RIH-x100W
€428 Price per unit

DOME LIGHT

Camera
Lens
Light
Workpiece

100MM, White, 24V / 20W, LED1-DL-150W
€526 Price per unit

COAXIAL LIGHT

Camera
Lens
Light
Workpiece

100MM, White, 24V / 20W, LED1-CO-100W
€428 Price per unit

Object not Flat:

yes

Object diffuse? (not reflective)

No, object (slightly reflective)

yes

Option 1: Ringlight (bright-field)
Reason: Easy mounting
Cum in test image

Option 2: 2 or 4 barlights
Reason: cheaper at large objects
Cum in test image (please note that in the test image only 1 bar is used, therefore shadows present)

Option 1: Dome light
(relief on product is less visible, chance on dark spot in the middle)

Euro, Screw in test image

Option 2: Coaxial light
(relief on product is visible)

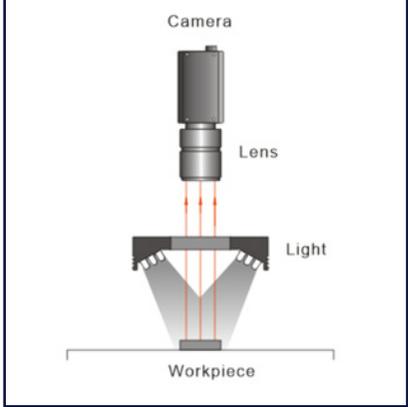
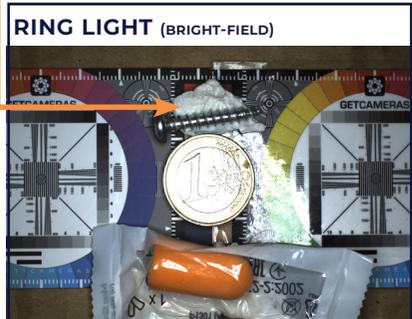
Euro, Screw in test image



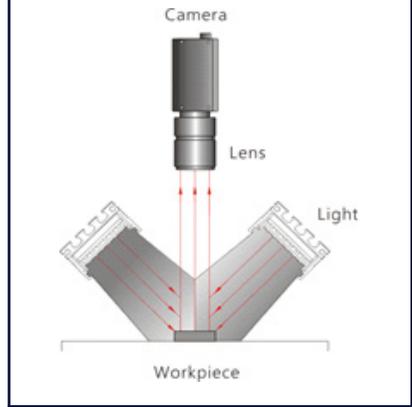
DOMI ILLUMINATION
Flat surface is largely free of reflections, with slight deformation of the surface again reflections visible.



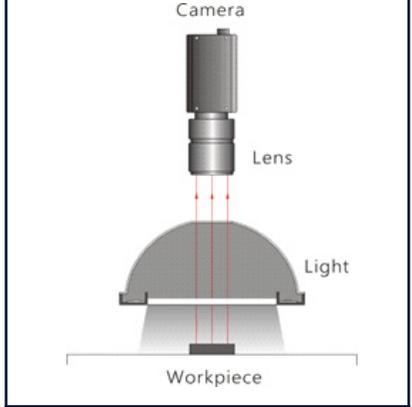
COAXIAL ILLUMINATION
No annoying wrinkles recognizable because the image is perfectly illuminated diffusely. Even the tablets nests structure does no longer three-dimensional.



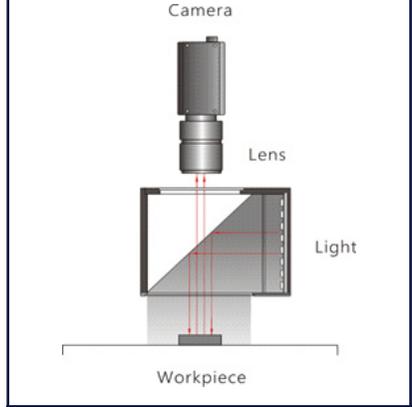
90MM, White, 24V / 9W, LED1-RL-90x70W
€204 Price per unit



119MM, White, 24V / 4.5W, LED1-BL-119x16W
€134 Price per unit



100MM, White, 24V / 20W, LED1-DL-150W
€526 Price per unit

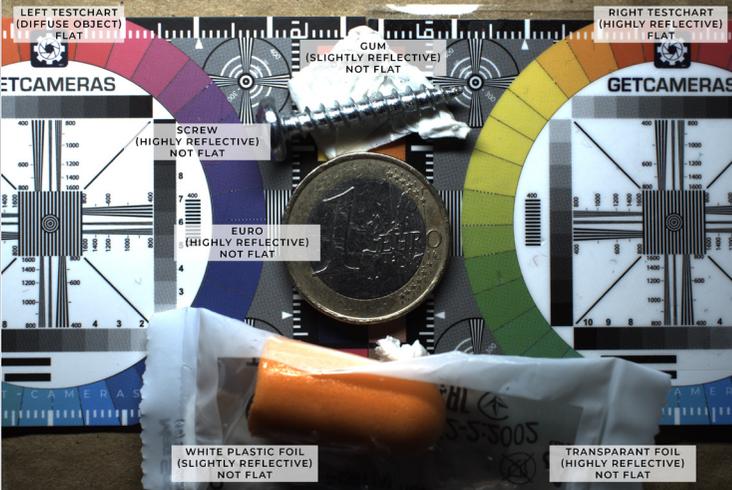


100MM, White, 24V / 20W, LED1-CO-100W
€428 Price per unit

RING LIGHT (BRIGHT-FIELD)
90MM, White, 24V / 9W, LED1-RL-90x70W



BAR LIGHT
119MM, White, 24V / 4.5W, LED1-BL-119x16W



RING LIGHT (DIFFUSE FLAT BRIGHT-FIELD)
100MM, White, 24V / 8.6W, LED1-RIH-x100W



DOME LIGHT
100MM, White, 24V / 20W, LED1-DL-150W



COAXIAL LIGHT
100MM, White, 24V / 20W, LED1-CO-100W

