

image processing libraries or module	data representation	color channel	channel order	minibatch input	shape (H: height, W, width, C, channel, N: batch size)	(data type, intensity range)	device
Scikit-image	NumPy ndarray	RGB	channel-last	false	(H, W, 3) or (rows, columns, 3)	(uint8, full range) default (uint16, full range) (uint32, full range) (float, 0 to 1) (float, -1 to 1) (int8, full range) (int16, full range) (int32, full range)	CPU
		Gray	none		(H, W) or (rows, columns)		
Opencv-python	NumPy ndarray	BGR	channel-last	false	(H, W, 3) or (rows, columns, 3)	(uint8, full range)	CPU
		Gray	none		(H, W) or (rows, columns)		
Pillow, imageio (Pillow backend)	PIL Image	RGB	channel-last	false	(H, W, 3)	(uint8, full range) default (uint16, full range) (float32, full range) (int32, full range)	CPU
		RGBA	channel-last		(H, W, 4)		
		Gray	none		(H, W)		
		GrayA(LA)	channel-last		(H, W, 2)		
scipy.ndimage (2D image)	NumPy ndarray	RGB	channel-last	false	(H, W, 3)	(uint8, full range) default (uint16, full range) (float32, full range) (int8, full range) (int16, full range) (int32, full range)	CPU
		Gray	none		(H, W)		
matplotlib(pypot.imshow)	NumPy ndarray, PIL Image	RGB	channel-last	false	(H, W, 3)	(uint8, full range)	CPU
		RGBA	channel-last		(H, W, 4)	(float, 0 to 1)	
		Gray	none		(H, W)	(uint8, full range)	

Pytorch, fastai, torchvision, Kornia	torch tensor	RGB	channel- first	false, true	(3, H, W), (1, 3, H, W)	(uint8, full range) (float, 0 to 1) (Kornia only support) (double, full range) (int8, full range) (int16, full range) (int32, full range) (int64, full range)	CPU, GPU
		Gray			(1, H, W), (1, 1, H, W)		
Tensorflow, keras, kerasCV	tf tensor	RGB	channel- last	false, true	(H, W, 3) (1, H, W, 3)	(uint8, full range) (uint16, full range) (uint32, full range) (uint64, full range) (float16, full range) (float32, 0 to 1) (float64, full range) (int8, full range) (int16, full range) (int32, full range) (int64, full range)	CPU, GPU
		Gray			(H, W, 1) (1, H, W, 1)		