

# NIRCam Instrumentation

JWST [Near Infrared Camera \(NIRCam\)](#) instrumentation includes [optics](#), [filters](#), [detectors](#), and other hardware receiving light from the [field of view](#) to support its [four observing modes](#).

## Overview of NIRCam instrument components

The [NIRCam science observing modes](#) at 0.6–5.0  $\mu\text{m}$  include [imaging](#), [coronagraphy](#), and grism [wide field slitless spectroscopy](#), as well as specialized [time-series monitoring](#) modes. To support these modes, as well as wavefront sensing for mirror alignment, information on the NIRCam instrument hardware is available in these articles:

- [NIRCam Optics](#) describes the mirrors and other elements.
- [NIRCam Coronagraphic Occulting Masks and Lyot Stops](#) describes the bar and round occulting masks.
- [NIRCam Pupil and Filter Wheels](#) describes the Lyot stops, filters, and other elements.
- [NIRCam Filters](#) describes the broad-, medium-, and narrowband filters.
- [NIRCam Grisms](#) describes slitless spectroscopy with  $R = \lambda/\Delta\lambda \sim 1,600$ , dispersing light along detector rows or columns.
- [NIRCam Weak Lenses](#) describes weak lenses used to defocus light, enabling imaging of brighter targets without saturation.
- [NIRCam Detectors](#) describes the eight short wavelength (0.6–2.3  $\mu\text{m}$ ) and two long wavelength (2.4–5.0  $\mu\text{m}$ ) detectors covering the same [field of view](#) for both [modules](#).

For wavefront sensing and mirror alignment, additional optical elements are available in the [pupil and filter wheels](#).

The two [NIRCam modules](#) contain nearly identical sets of all of these elements.