

CPC**COOPERATIVE PATENT CLASSIFICATION****G01J**

MEASUREMENT OF INTENSITY, VELOCITY, SPECTRAL CONTENT, POLARISATION, PHASE OR PULSE CHARACTERISTICS OF INFRA-RED, VISIBLE OR ULTRA-VIOLET LIGHT; COLORIMETRY; RADIATION PYROMETRY (light sources [F21](#), [H01J](#), [H01K](#), [H05B](#); investigating properties of materials by optical means [G01N](#))

NOTE

This subclass covers the detection of the presence or absence of infra-red, visible, or ultra-violet light, not otherwise provided for.

Attention is drawn to the Notes following the title of class [G01](#).

G01J 1/00

Photometry, e.g. photographic exposure meter (spectrophotometry [G01J 3/00](#); specially adapted for radiation pyrometry [G01J 5/00](#)) **{exposure meters built in cameras [G03B 17/06](#)}**

G01J 1/02

. Details

G01J 1/0204

.. { Compact construction }

G01J 1/0209

... { Monolithic }

G01J 1/0214

.. { Constructional arrangements for removing stray light }

G01J 1/0219

.. { Electrical interface; User interface }

G01J 1/0223

.. { Sample holders for photometry }

G01J 1/0228

.. { Control of working procedures; Failure detection; Spectral bandwidth calculation }

G01J 1/0233

.. { Handheld }

G01J 1/0238

.. { making use of sensor-related data, e.g. for identification of sensor or optical parts }

G01J 1/0242

.. { Control or determination of height or angle information of sensors or receivers; Goniophotometry }

G01J 1/0247

.. { using a charging unit }

G01J 1/0252

.. { Constructional arrangements for compensating for fluctuations caused by e.g. temperature, or using cooling or temperature stabilization of parts of the device; Controlling the atmosphere inside a photometer; Purge systems, cleaning devices (protection against electromagnetic interferences [G01J 2001/0276](#)) }

G01J 2001/0257

.. {portable }

G01J 2001/0261

... {Pocket size; Card size }

G01J 1/0266

.. { Field-of-view determination; Aiming or pointing of a photometer; Adjusting alignment; Encoding angular position; Size of the measurement area; Position tracking; Photodetection involving different fields of view for a single detector }

G01J 1/0271

.. { Housings; Attachments or accessories for photometers }

G01J 2001/0276

.. {Protection }

G01J 2001/028

... {against liquid }

G01J 2001/0285

... {against laser damage }

G01J 1/029

.. { Multi-channel photometry }

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|----------------|------|---|
| G01J 1/0295 | .. | { Constructional arrangements for removing other types of optical noise or for performing calibration} |
| G01J 1/04 | .. | Optical or mechanical part {supplementary adjustable parts} |
| G01J 1/0403 | ... | { Mechanical elements; Supports for optical elements; Scanning arrangements} |
| G01J 1/0407 | ... | { Optical elements not provided otherwise, e.g. manifolds, windows, holograms, gratings} |
| G01J 1/0411 | .... | { using focussing or collimating elements, i.e. lenses or mirrors; Aberration correction} |
| G01J 1/0414 | .... | { using plane or convex mirrors, parallel phase plates, or plane beam-splitters} |
| G01J 1/0418 | .... | { using attenuators} |
| G01J 1/0422 | .... | { using light concentrators, collectors or condensers} |
| G01J 1/0425 | .... | { using optical fibers} |
| G01J 1/0429 | .... | { using polarisation elements} |
| G01J 1/0433 | .... | { using notch filters} |
| G01J 1/0437 | .... | { using masks, aperture plates, spatial light modulators, spatial filters, e.g. reflective filters} |
| G01J 1/044 | .... | { using shutters} |
| G01J 1/0444 | .... | { using means for replacing an element by another, e.g. for replacing a filter or grating} |
| G01J 1/0448 | .... | { Adjustable, e.g. focussing} |
| G01J 1/0451 | .... | { using means for illuminating a slit efficiently, e.g. entrance slit of a photometer or entrance face of fiber} |
| G01J 1/0455 | .... | { having a throughhole enabling the optical element to fulfil an additional optical function, e.g. a mirror or grating having a through-hole for a light collecting or light injecting optical fibre} |
| G01J 1/0459 | .... | { using an optical amplifier of light or coatings to improve optical coupling} |
| G01J 1/0462 | .... | { Slit arrangements} |
| G01J 1/0466 | .... | { with a sighting port} |
| G01J 1/047 | .... | { using extension/expansion of solids or fluids, change of resonant frequency or extinction effect} |
| G01J 1/0474 | .... | { Diffusers (cavities G01J 2001/0481)} |
| G01J 1/0477 | .... | { Prisms, wedges} |
| G01J 2001/0481 | ... | {Preset integrating sphere or cavity } |
| G01J 2001/0485 | ... | {Cosinus correcting or purposely modifying the angular response of a light sensor } |
| G01J 1/0488 | ... | { with spectral filtering} |
| G01J 1/0492 | .... | { using at least two different filters} |
| G01J 2001/0496 | .... | {using fiber Bragg gratings} |
| G01J 1/06 | ... | Restricting the angle of incident light |
| G01J 2001/061 | .... | {Baffles } |
| G01J 2001/062 | | {by fibre-optic packed bundle } |
| G01J 2001/063 | | {with selectable field of view } |

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| G01J 2001/065 | | {by changing elements } |
| G01J 2001/066 | | {with an aiming optical device } |
| G01J 2001/067 | .... | {for angle scan } |
| G01J 2001/068 | ..... | {by diaphragm or the like } |
| G01J 1/08 | .. | Arrangements of light sources specially adapted for photometry {standard sources, also using luminescent or radioactive material} |
| G01J 2001/083 | ... | {Testing response of detector } |
| G01J 2001/086 | ... | {Calibrating drift correction } |
| G01J 1/10 | . | by comparison with reference light or electric value {provisionally void} |
| G01J 1/12 | .. | using wholly visual means (G01J 1/20 takes precedence) |
| G01J 1/122 | ... | { Visual exposure meters for determining the exposure time in photographic recording or reproducing } |
| G01J 1/124 | .... | {based on the comparison of the intensity of measured light with a comparison source or comparison illuminated surface } |
| G01J 1/126 | ..... | {for enlarging apparatus } |
| G01J 1/128 | ..... | {for copy- or printing apparatus } |
| G01J 1/14 | ... | using comparison with a surface of graded brightness, {e.g. for view taking; for analytical applications G01N 21/293 } |
| G01J 1/16 | .. | using electric radiation detectors (G01J 1/20 takes precedence) |
| G01J 2001/1605 | ... | {Null method } |
| G01J 2001/161 | ... | {Ratio method, i.e. I_m/I_r } |
| G01J 2001/1615 | .... | {Computing a difference/sum ratio, i.e. $(I_m - I_r) / (I_m + I_r)$ } |
| G01J 2001/1621 | .... | {Comparing a duty ratio of pulses } |
| G01J 1/1626 | ... | {Arrangements with two photodetectors, the signals of which are compared } |
| G01J 2001/1631 | .... | {Bridge circuit } |
| G01J 2001/1636 | .... | {one detector directly monitoring the source, e.g. also impulse time controlling } |
| G01J 2001/1642 | ..... | {and acting on the detecting circuit } |
| G01J 2001/1647 | .... | {one signal maintained constant } |
| G01J 2001/1652 | .... | {one detector being transparent before the other one } |
| G01J 2001/1657 | .... | {one signal being spectrally modified, e.g. for UV } |
| G01J 2001/1663 | .... | {two detectors of different sensitivity } |
| G01J 2001/1668 | ... | {the measuring signal itself varying in time, e.g. periodic, for example blood pulsation } |
| G01J 2001/1673 | ... | {using a reference sample } |
| G01J 2001/1678 | ... | {Comparing time separated signals, i.e. chopped } |
| G01J 2001/1684 | .... | {and selecting also a DC level from the signal } |
| G01J 2001/1689 | .... | {one separated signal being processed differently } |
| G01J 2001/1694 | .... | {with a signal from on/off switched light source } |
| G01J 1/18 | ... | using comparison with a reference electric value |
| G01J 2001/182 | | {with SH sample and hold circuits } |
| G01J 2001/184 | | {on a succession of signals } |

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|----------------|-------|---|
| G01J 2001/186 | | {Comparison or correction from an electric source within the processing circuit } |
| G01J 2001/188 | ..... | {on pulse train } |
| G01J 1/20 | .. | intensity of the measured or reference value being varied to equalise their effects at the detectors, e.g. by varying incidence angle |
| G01J 1/22 | ... | using a variable element in the light-path, e.g. filter, polarising means (G01J 1/34 takes precedence) |
| G01J 1/24 | .... | using electric radiation detectors |
| G01J 2001/242 | ..... | {Filter wheel, i.e. absorption filter series graduated } |
| G01J 2001/245 | ..... | {with two or more separate attenuated steps } |
| G01J 2001/247 | ..... | {of spectral wedge type } |
| G01J 1/26 | ..... | adapted for automatic variation of the measured or reference value (regulation of light intensity G05D 25/00) |
| G01J 1/28 | ... | using variation of intensity or distance of source (G01J 1/34 takes precedence) |
| G01J 1/30 | .... | using electric radiation detectors |
| G01J 1/32 | ..... | adapted for automatic variation of the measured or reference value (regulation of light intensity G05D 25/00) |
| G01J 1/34 | ... | using separate light paths used alternately or sequentially, e.g. flicker |
| G01J 1/36 | .... | using electric radiation detectors |
| G01J 2001/363 | ..... | {Chopper stabilisation } |
| G01J 2001/366 | ..... | {Balancing two paths } |
| G01J 1/38 | . | using wholly visual means (G01J 1/10 takes precedence) |
| G01J 1/40 | .. | using limit or visibility or extinction effect |
| G01J 1/42 | . | using electric radiation detectors (optical or mechanical part G01J 1/04 ; by comparison with a reference light or electric value G01J 1/10) |
| G01J 1/4204 | .. | { with determination of ambient light (solar light G01J 2001/4266) } |
| G01J 1/4209 | .. | {Photoelectric exposure meters for determining the exposure time in recording or reproducing} |
| G01J 1/4214 | ... | {specially adapted for view-taking apparatus} |
| G01J 1/4219 | ... | {specially adapted for enlargers} |
| G01J 1/4223 | ... | {specially adapted for copy - or printing apparatus} |
| G01J 1/4228 | .. | { arrangements with two or more detectors, e.g. for sensitivity compensation} |
| G01J 2001/4233 | ... | {with selection of detector } |
| G01J 2001/4238 | .. | {Pulsed light } |
| G01J 2001/4242 | .. | {Modulated light, e.g. for synchronizing source and detector circuit } |
| G01J 2001/4247 | .. | {for testing lamps or other light sources } |
| G01J 2001/4252 | ... | {for testing LED`s } |
| G01J 1/4257 | .. | {applied to monitoring the characteristics of a beam, e.g. laser beam, headlamp beam (monitoring arrangements for lasers in general H01S 3/0014)} |
| G01J 2001/4261 | ... | {Scan through beam in order to obtain a cross-sectional profile of the beam } |
| G01J 2001/4266 | .. | {for measuring solar light } |
| G01J 2001/4271 | ... | {Pyrrheliometer } |

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| G01J 2001/4276 | ... | {Solar energy integrator over time } |
| G01J 2001/428 | ... | {for sunlight scattered by atmosphere } |
| G01J 2001/4285 | ... | {Pyranometer, i.e. integrating over space } |
| G01J 1/429 | .. | {applied to measurement of ultraviolet light (using counting tubes G01T)} |
| G01J 2001/4295 | .. | {using a physical effect not covered by other subgroups of G01J 1/42 } |
| G01J 1/44 | .. | Electric circuits {for command of an exposure part G03B 7/02 } |
| G01J 2001/4406 | ... | {Plural ranges in circuit, e.g. switchable ranges; Adjusting sensitivity selecting gain values } |
| G01J 2001/4413 | ... | {Type } |
| G01J 2001/442 | .... | {Single-photon detection or photon counting } |
| G01J 2001/4426 | .... | {with intensity to frequency or voltage to frequency conversion [IFC or VFC] } |
| G01J 2001/4433 | .... | {Peak sensing } |
| G01J 2001/444 | ... | {Compensating; Calibrating, e.g. dark current, temperature drift, noise reduction or baseline correction; Adjusting } |
| G01J 2001/4446 | ... | {Type of detector } |
| G01J 2001/4453 | .... | {PMT } |
| G01J 2001/446 | .... | {Photodiode } |
| G01J 2001/4466 | ..... | {Avalanche } |
| G01J 2001/4473 | .... | {Phototransistor } |
| G01J 2001/448 | .... | {Array (CCD) } |
| G01J 2001/4486 | .... | {Streak tube } |
| G01J 2001/4493 | .... | {with image intensifier tube (IIT) } |
| G01J 1/46 | ... | using a capacitor |
| G01J 1/48 | . | using chemical effects |
| G01J 1/50 | .. | using change in colour of an indicator, e.g. actinometer |
| G01J 1/52 | .. | using photographic effects |
| G01J 1/54 | .. | by observing photo-reactions between gases |
| G01J 1/56 | . | using radiation pressure or radiometer effect |
| G01J 1/58 | . | using luminescence generated by light |
| G01J 1/60 | . | by measuring the pupil of the eye |
| G01J 3/00 | | Spectrometry; Spectrophotometry; Monochromators; Measuring colour |
| G01J 2003/003 | . | {Comparing spectra of two light sources } |
| G01J 2003/006 | . | {Fundamentals or review articles} |
| G01J 3/02 | . | Details |
| G01J 3/0202 | .. | { Mechanical elements; Supports for optical elements} |
| G01J 3/0205 | .. | { Optical elements not provided otherwise, e. g. optical manifolds, diffusers, windows} |
| G01J 3/0208 | ... | { using focussing or collimating elements, e.g. lenses or mirrors; performing aberration correction} |
| G01J 3/021 | ... | { using plane or convex mirrors, parallel phase plates, or particular reflectors} |

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|----------------|------|---|
| G01J 3/0213 | ... | { using attenuators} |
| G01J 3/0216 | ... | { using light concentrators or collectors or condensers} |
| G01J 3/0218 | ... | { using optical fibers} |
| G01J 3/0221 | .... | { the fibers defining an entry slit} |
| G01J 3/0224 | ... | { using polarising or depolarising elements} |
| G01J 3/0227 | ... | { using notch filters} |
| G01J 3/0229 | ... | { using masks, aperture plates, spatial light modulators or spatial filters, e.g. reflective filters} |
| G01J 3/0232 | ... | { using shutters} |
| G01J 3/0235 | ... | { using means for replacing an element by another, for replacing a filter or a grating} |
| G01J 3/0237 | ... | { Adjustable, e.g. focussing} |
| G01J 3/024 | ... | { using means for illuminating a slit efficiently (e.g. entrance slit of a spectrometer or entrance face of fiber)} |
| G01J 3/0243 | ... | { having a through-hole enabling the optical element to fulfil an additional optical function, e.g. a mirror or grating having a throughhole for a light collecting or light injecting optical fiber} |
| G01J 3/0245 | ... | { using an optical amplifier of light, e.g. doped fiber} |
| G01J 3/0248 | ... | { using a sighting port, e.g. camera or human eye} |
| G01J 3/0251 | ... | { Colorimeters making use of an integrating sphere} |
| G01J 3/0254 | ... | { Spectrometers, other than colorimeters, making use of an integrating sphere} |
| G01J 3/0256 | .. | { Compact construction} |
| G01J 3/0259 | ... | { Monolithic} |
| G01J 3/0262 | .. | { Constructional arrangements for removing stray light} |
| G01J 3/0264 | .. | { Electrical interface; User interface} |
| G01J 3/0267 | .. | { Sample holders for colorimetry} |
| G01J 3/027 | .. | { Control of working procedures of a spectrometer; Failure detection; Bandwidth calculation} |
| G01J 3/0272 | .. | { Handheld} |
| G01J 3/0275 | .. | { making use of sensor-related data, e. g. for identification of sensor parts or optical elements} |
| G01J 3/0278 | .. | { Control or determination of height or angle information for sensors or receivers} |
| G01J 2003/0281 | .. | {slitless } |
| G01J 3/0283 | .. | { using a charging unit} |
| G01J 3/0286 | .. | { Constructional arrangements for compensating for fluctuations caused by temperature, humidity or pressure, or using cooling or temperature stabilization of parts of the device; Controlling the atmosphere inside a spectrometer, e.g. vacuum} |
| G01J 3/0289 | .. | { Field-of-view determination; Aiming or pointing of a spectrometer; Adjusting alignment; Encoding angular position; Size of measurement area; Position tracking} |
| G01J 3/0291 | .. | { Housings; Spectrometer accessories; Spatial arrangement of elements, e.g. folded path arrangements} |
| G01J 3/0294 | .. | { Multi-channel spectroscopy} |

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| G01J 3/0297 | .. | { Constructional arrangements for removing other types of optical noise or for performing calibration } |
| G01J 3/04 | .. | Slit arrangements {slit adjustment} |
| G01J 2003/042 | ... | {Slit wheel } |
| G01J 2003/045 | ... | {Sequential slits; Multiple slits } |
| G01J 2003/047 | ... | {Configuration of two or more entry or exit slits for predetermined delta-lambda } |
| G01J 3/06 | .. | Scanning arrangements {arrangements for order-selection} |
| G01J 2003/061 | ... | {Mechanisms, e.g. sine bar } |
| G01J 2003/062 | ... | {motor-driven } |
| G01J 2003/063 | .... | {Step motor } |
| G01J 2003/064 | ... | {Use of other elements for scan, e.g. mirror, fixed grating } |
| G01J 2003/065 | .... | {Use of fibre scan for spectral scan } |
| G01J 2003/066 | ... | {Microprocessor control of functions, e.g. slit, scan, bandwidth during scan } |
| G01J 2003/067 | ... | {Use of plane parallel plate, e.g. small scan, wobble } |
| G01J 2003/068 | ... | {tuned to preselected wavelengths } |
| G01J 2003/069 | ... | {Complex motion, e.g. rotation of grating and correcting translation } |
| G01J 3/08 | .. | Beam switching arrangements |
| G01J 3/10 | .. | Arrangements of light sources specially adapted for spectrometry or colorimetry |
| G01J 2003/102 | ... | {Plural sources } |
| G01J 2003/104 | .... | {Monochromatic plural sources } |
| G01J 2003/106 | .... | {the two sources being alternating or selectable, e.g. in two ranges or line:continuum } |
| G01J 3/108 | ... | {for measurement in the infra-red range} |
| G01J 3/12 | . | Generating the spectrum; Monochromators |
| G01J 2003/1204 | .. | {Grating and filter } |
| G01J 2003/1208 | .. | {Prism and grating } |
| G01J 2003/1213 | .. | {Filters in general, e.g. dichroic, band } |
| G01J 2003/1217 | ... | {Indexed discrete filters or choppers } |
| G01J 2003/1221 | ... | {Mounting; Adjustment } |
| G01J 2003/1226 | .. | {Interference filters } |
| G01J 2003/123 | ... | {Indexed discrete filters } |
| G01J 2003/1234 | ... | {Continuously variable IF (CVIF); Wedge type } |
| G01J 2003/1239 | ... | {and separate detectors } |
| G01J 2003/1243 | ... | {Pivoting IF or other position variation } |
| G01J 2003/1247 | ... | {Tuning } |
| G01J 2003/1252 | ... | {Using "resonance cell", e.g. Na vapor } |
| G01J 3/1256 | .. | {using acousto-optic tunable filter; (acousto-optic elements or systems G02F 1/11 , G02F 1/33)} |
| G01J 2003/126 | .. | {Focal isolation type } |
| G01J 2003/1265 | .. | {the wavelengths being separated in time, e.g. through optical fibre array } |
| G01J 2003/1269 | .. | {Electrooptic filter } |

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| G01J 2003/1273 | .. | {Order selection } |
| G01J 2003/1278 | .. | {Mask with spectral selection } |
| G01J 2003/1282 | .. | {Spectrum tailoring } |
| G01J 2003/1286 | .. | {Polychromator in general } |
| G01J 2003/1291 | .. | {polarised, birefringent } |
| G01J 2003/1295 | .. | {Plural entry slits, e.g. for different incidences } |
| G01J 3/14 | .. | using refracting elements, e.g. prisms (G01J 3/18 , G01J 3/26 take precedence) {prisms per se G02B 5/04 } |
| G01J 2003/145 | ... | {Prism systems for straight view } |
| G01J 3/16 | ... | with autocollimation |
| G01J 3/18 | .. | using diffraction elements, e.g. grating (gratings per se G02B) |
| G01J 3/1804 | ... | {Plane gratings} |
| G01J 3/1809 | ... | {Echelle gratings} |
| G01J 2003/1814 | ... | {Double monochromator } |
| G01J 2003/1819 | .... | {Double pass monochromator } |
| G01J 2003/1823 | .... | {subtractive } |
| G01J 2003/1828 | ... | {with order sorter or prefilter } |
| G01J 3/1833 | ... | {Grazing incidence} |
| G01J 3/1838 | ... | {Holographic gratings} |
| G01J 2003/1842 | ... | {Types of grating } |
| G01J 2003/1847 | .... | {Variable spacing } |
| G01J 2003/1852 | .... | {Cylindric surface } |
| G01J 2003/1857 | .... | {Toroid surface } |
| G01J 2003/1861 | .... | {Transmission gratings } |
| G01J 2003/1866 | ... | {Monochromator for three or more wavelengths } |
| G01J 2003/1871 | .... | {Duochromator } |
| G01J 2003/1876 | .... | {Polychromator } |
| G01J 2003/188 | ... | {Constant deviation } |
| G01J 2003/1885 | ... | {Holder for interchangeable gratings, e.g. at different ranges of wavelengths } |
| G01J 3/189 | ... | { using at least one grating in an off-plane configuration} |
| G01J 3/1895 | ... | { using fiber Bragg gratings or gratings integrated in a waveguide} |
| G01J 3/20 | ... | Rowland circle spectrometers |
| G01J 3/22 | ... | Littrow mirror spectrometers |

WARNING

material provisionally in [G01J 3/18](#)

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|---------------|-----|---|
| G01J 3/24 | ... | using gratings profiled to favour a specific order |
| G01J 3/26 | .. | using multiple reflection, e.g. Fabry-Perot interferometer, variable interference filters |
| G01J 2003/262 | ... | {Double pass; Multiple pass } |

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| G01J 2003/265 | ... | {Read out, e.g. polychromator } |
| G01J 2003/267 | ... | {of the SISAM type } |
| G01J 3/28 | . | Investigating the spectrum (using colour filters G01J 3/51) |
| G01J 3/2803 | .. | {using photoelectric array detector} |
| G01J 2003/2806 | ... | {Array and filter array } |
| G01J 2003/2809 | .... | {Array and correcting filter } |
| G01J 2003/2813 | ... | {2D-array } |
| G01J 2003/2816 | ... | {Semiconductor laminate layer } |
| G01J 2003/282 | ... | {Modified CCD or like } |
| G01J 3/2823 | .. | {Imaging spectrometer} |
| G01J 2003/2826 | ... | {Multispectral imaging, e.g. filter imaging } |
| G01J 2003/283 | .. | {computer-interfaced } |
| G01J 2003/2833 | ... | {and memorised spectra collection } |
| G01J 2003/2836 | ... | {Programming unit, i.e. source and date processing } |
| G01J 2003/284 | ... | {Spectral construction } |
| G01J 2003/2843 | ... | {Processing for eliminating interfering spectra } |
| G01J 3/2846 | .. | { using modulation grid; Grid spectrometers} |
| G01J 2003/285 | ... | {Hadamard transformation } |
| G01J 2003/2853 | .. | {Averaging successive scans or readings } |
| G01J 2003/2856 | ... | {and calculation of standard deviation } |
| G01J 2003/2859 | .. | {Peak detecting in spectrum } |
| G01J 2003/2863 | ... | {and calculating peak area } |
| G01J 2003/2866 | .. | {Markers; Calibrating of scan } |
| G01J 2003/2869 | ... | {Background correcting } |
| G01J 2003/2873 | ... | {Storing reference spectrum } |
| G01J 2003/2876 | ... | {Correcting linearity of signal } |
| G01J 2003/2879 | ... | {Calibrating scan, e.g. Fabry Perot interferometer } |
| G01J 2003/2883 | ... | {Correcting overlapping } |
| G01J 2003/2886 | .. | {Investigating periodic spectrum } |
| G01J 3/2889 | .. | {Rapid scan spectrometers; Time resolved spectrometry} |
| G01J 2003/2893 | ... | {with rotating grating } |
| G01J 2003/2896 | .. | {Vidicon, image intensifier tube } |
| G01J 3/30 | .. | Measuring the intensity of spectral line directly on the spectrum itself (G01J 3/42 , G01J 3/44 take precedence) |
| G01J 3/32 | ... | Investigating bands of a spectrum in sequence by a single detector |
| G01J 2003/323 | .... | {Comparing line:background } |
| G01J 2003/326 | .... | {Scanning mask, plate, chopper, e.g. small spectrum interval } |
| G01J 3/36 | ... | Investigating two or more bands of a spectrum by separate detectors |
| G01J 3/40 | .. | Measuring the intensity of spectral lines by determining density of a photograph of the spectrum; Spectrography (G01J 3/42 , G01J 3/44 take precedence) |

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| G01J 3/42 | .. | Absorption spectrometry; Double beam spectrometry; Flicker spectrometry; Reflection spectrometry (beam switching arrangements G01J 3/08) |
| G01J 2003/421 | ... | {Single beam } |
| G01J 2003/423 | ... | {Spectral arrangements using lasers, e.g. tunable } |
| G01J 2003/425 | ... | {Reflectance } |
| G01J 3/427 | ... | Dual wavelengths spectrometry |
| G01J 2003/4275 | .... | {Polarised dual wavelength spectrometry } |
| G01J 3/433 | ... | Modulation spectrometry; Derivative spectrometry |
| G01J 2003/4332 | .... | {frequency-modulated } |
| G01J 2003/4334 | .... | {by modulation of source, e.g. current modulation } |
| G01J 2003/4336 | .... | {by magnetic modulation, e.g. Zeeman effect } |
| G01J 3/4338 | .... | {Frequency modulated spectrometry} |
| G01J 3/44 | .. | Raman spectrometry; Scattering spectrometry; {Fluorescence spectrometry} |
| G01J 3/4406 | ... | {Fluorescence spectrometry} |
| G01J 3/4412 | ... | {Scattering spectrometry (particle sizing by light scattering G01N 15/0205 ; optical velocimetry of particles G01P 5/20 , G01P 5/26)} |
| G01J 2003/4418 | .... | {Power spectrum } |
| G01J 2003/4424 | ... | {Fluorescence correction for Raman spectrometry } |
| G01J 3/443 | .. | Emission spectrometry |
| G01J 2003/4435 | ... | {Measuring ratio of two lines, e.g. internal standard } |
| G01J 3/447 | .. | Polarisation spectrometry |
| G01J 3/45 | .. | Interferometric spectrometry |
| G01J 2003/451 | ... | {Dispersive interferometric spectrometry } |
| G01J 2003/452 | ... | {with recording of image of spectral transformation, e.g. hologram } |
| G01J 3/453 | ... | by correlation of the amplitudes |
| G01J 3/4531 | .... | {Devices without moving parts} |
| G01J 3/4532 | .... | {Devices of compact or symmetric construction (G01J 3/4531 takes precedence)} |
| G01J 2003/4534 | .... | {Interferometer on illuminating side } |
| G01J 3/4535 | .... | {Devices with moving mirror (G01J 3/4532 takes precedence)} |
| G01J 3/4537 | .... | {Devices with refractive scan} |
| G01J 2003/4538 | .... | {Special processing } |
| G01J 3/457 | .. | Correlation spectrometry, e.g. of the intensity (G01J 3/453 takes precedence) |
| G01J 3/46 | . | Measurement of colour; Colour measuring devices, e.g. colorimeters (measuring colour temperature G01J 5/60) |
| G01J 3/461 | .. | {with colour spinners} |
| G01J 3/462 | .. | { Computing operations in or between colour spaces; Colour management systems} |
| G01J 3/463 | .. | { Colour matching} |
| G01J 3/465 | .. | { taking into account the colour perception of the eye; using tristimulus detection} |
| G01J 2003/466 | .. | {Coded colour; Recognition of predetermined colour; Determining proximity to predetermined colour } |

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| G01J 2003/467 | .. {Colour computing } |
| G01J 2003/468 | .. {of objects containing fluorescent agent } |
| G01J 3/50 | .. using electric radiation detectors |
| G01J 3/501 | ... { Colorimeters using spectrally-selective light sources, e.g. LEDs} |
| G01J 3/502 | ... { using a dispersive element, e.g. grating, prism} |
| G01J 2003/503 | ... {Densitometric colour measurements} |
| G01J 3/504 | ... { Goniometric colour measurements, for example measurements of metallic or flake based paints} |
| G01J 3/505 | ... { measuring the colour produced by lighting fixtures other than screens, monitors, displays or CRTs} |
| G01J 3/506 | ... { measuring the colour produced by screens, monitors, displays or CRTs} |
| G01J 2003/507 | ... {the detectors being physically selective } |
| G01J 3/508 | ... { measuring the colour of teeth} |
| G01J 3/51 | ... using colour filters |
| G01J 3/513 | { having fixed filter-detector pairs} |
| G01J 2003/516 | {with several stacked filters or stacked filter-detector pairs} |
| G01J 3/52 | .. using colour charts |
| G01J 3/522 | ... {circular colour charts} |
| G01J 3/524 | ... { Calibration of colorimeters} |
| G01J 3/526 | ... { for choosing a combination of different colours, e.g. to produce a pleasing effect for an observer} |
| G01J 3/528 | { using colour harmony theory} |
| G01J 4/00 | Measuring polarisation of light (investigating or analysing materials by measuring rotation of plane of polarised light G01N 21/21) |
| G01J 2004/001 | . {Devices } |
| G01J 2004/002 | .. {Selecting polarisation direction } |
| G01J 2004/004 | ... {sequential, i.e. time-divided } |
| G01J 2004/005 | ... {simultaneous, i.e. space-divided } |
| G01J 2004/007 | ... {Mechanical mounting } |
| G01J 2004/008 | . {Polarisation rate } |
| G01J 4/02 | . Polarimeters of separated-field type; Polarimeters of half-shadow type |
| G01J 4/04 | . Polarimeters using electric detection means (G01J 4/02 takes precedence) |
| G01J 5/00 | Radiation pyrometry (photometry in general G01J 1/00 ; spectrometry in general G01J 3/00) {measuring temperature in general, i.e. with a contacting sensor G01K ; calorimetry of radiation beams G01K 17/00 ; direction finders for radiant sources G01S ; intrusion detection by radiation G08B } |
| G01J 5/0003 | . {for sensing the radiant heat transfer of samples, e.g. emittance meter} |
| G01J 5/0007 | .. { of wafers or semiconductor substrates, e.g. using Rapid Thermal Processing} |
| G01J 5/0011 | .. { Ear thermometers (G01J 5/021 and G01J 5/049 take precedence)} |
| G01J 5/0014 | . {for sensing the radiation from gases, flames} |
| G01J 5/0018 | .. { Flames, plasma or welding} |

- G01J 5/0022 . {for sensing the radiation of moving bodies}
- G01J 5/0025 .. { Living bodies (ear thermometers [G01J 5/0011](#); detecting, measuring or recording for diagnostic purposes [A61B 5/00](#))}
- G01J 2005/0029 .. {Sheet }
- G01J 2005/0033 .. {Wheel }
- G01J 5/0037 . { for sensing the heat emitted by liquids}
- G01J 5/004 .. { by molten metals}
- G01J 5/0044 . { Furnaces, ovens, kilns ([G01J 5/0007](#), [G01J 5/004](#) take precedence)}
- G01J 2005/0048 . {Calibrating; Correcting }
- G01J 2005/0051 .. {Methods for correcting for emissivity }
- G01J 2005/0055 .. {Atmospheric correction }
- G01J 2005/0059 .. {Correcting for reflection of the emitter radiation }
- G01J 2005/0062 .. {Linearising circuits }
- G01J 5/0066 . { for hot spots detection}
- G01J 5/007 . { for earth observation}
- G01J 2005/0074 . {having separate detection of emissivity }
- G01J 2005/0077 . {Imaging }
- G01J 2005/0081 . {Thermography }
- G01J 2005/0085 .. {Temperature profile }
- G01J 5/0088 . { in turbines}
- G01J 2005/0092 . {Temperature by averaging, e.g. by scan (scan intended for space- resolved determination [G01J 2005/0081](#))}
- G01J 5/0096 . { for measuring wires, electrical contacts or electronic systems}
- G01J 5/02 . Details
- G01J 5/0205 .. { Mechanical elements; Supports for optical elements}
- G01J 5/021 .. { Probe covers for thermometers, e.g. tympanic thermometers; Containers for probe covers; Disposable probes}
- G01J 5/0215 .. { Compact construction}
- G01J 5/022 ... { Monolithic}
- G01J 5/0225 .. { Shape of the cavity itself or of elements contained in or suspended over the cavity}
- G01J 5/023 ... { Particular leg structure or construction or shape; Nanotubes}
- G01J 5/0235 ... { Spacers, e.g. for avoidance of stiction}
- G01J 5/024 ... { Special manufacturing steps or sacrificial layers or layer structures}
- G01J 5/0245 ... { for performing thermal shunt}
- G01J 5/025 .. { Interfacing a pyrometer to an external device or network; User interface}
- G01J 5/0255 .. { Sample holders for pyrometry; Cleaning of sample (using a gas purge [G01J 5/029](#))}
- G01J 5/026 .. { Control of working procedures of a pyrometer, other than calibration (calibration [G01J 2005/0048](#) and [G01J 5/522](#)); Detecting failures in the functioning of a pyrometer; Bandwidth calculation; Gain control; Security control}
- G01J 5/0265 .. { Handheld, portable (ear thermometers [G01J 5/049](#))}

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| G01J 5/027 | .. | { making use of sensor-related data, e.g. for identification of sensor parts or optical elements} |
| G01J 5/0275 | .. | { Control or determination of height or distance or angle information for sensors or receivers} |
| G01J 5/028 | .. | { using a charging unit or battery} |
| G01J 5/0285 | .. | { Constructional arrangements for compensating for fluctuations caused by humidity, pressure or electromagnetic waves; Controlling the atmosphere inside a pyrometer (G01J 5/029 takes precedence)} |
| G01J 5/029 | .. | { using a gas purge} |
| G01J 5/0295 | .. | { Nulling devices or absolute detection} |
| G01J 5/04 | .. | Casings {Mountings} |
| G01J 5/041 | ... | {Mountings in enclosures or in a particular environment} |
| G01J 5/042 | .... | { High-temperature environment (G01J 5/0007 , G01J 5/0044 , G01J 5/0088 and G01J 5/004 take precedence)} |
| G01J 5/043 | .... | { Prevention or determination of dust, smog or clogging (G01J 5/029 takes precedence)} |
| G01J 5/044 | .... | { Environment with strong vibrations or shocks} |
| G01J 5/045 | .... | { Sealings; Vacuum enclosures; Encapsulated packages; Wafer bonding structures; Getter arrangements (getter arrangements per se H01L 23/26 and H01L 21/3221)} |
| G01J 5/046 | ... | { Materials; Selection of thermal materials} |
| G01J 5/047 | ... | { Mobile mounting; Scanning arrangements} |
| G01J 5/048 | ... | { Protective parts} |
| G01J 5/049 | ... | { Casings for tympanic thermometers} |
| G01J 5/06 | .. | Arrangements for eliminating effects of disturbing radiation |
| G01J 5/061 | ... | {using cooling or thermostating of parts of the apparatus (cooling techniques in general F17C , F25J)} |
| G01J 2005/062 | .... | {Peltier } |
| G01J 2005/063 | .... | {Heating; Thermostating } |
| G01J 2005/065 | ... | {by shielding } |
| G01J 2005/066 | ... | {Differential arrangement, i.e. sensitive/not sensitive } |
| G01J 2005/067 | ... | {Compensating for environment parameters } |
| G01J 2005/068 | .... | {Ambient temperature sensor; Housing temperature sensor } |
| G01J 5/08 | .. | Optical features {optical-mechanical scanning H04N 5/33 , G02B 26/10 } |
| G01J 5/0803 | ... | { Optical elements not provided otherwise, e.g. optical manifolds, gratings, holograms, cubic beamsplitters, prisms, particular coatings} |
| G01J 5/0806 | .... | { using focussing or collimating elements,e.g. lenses or mirrors} |
| G01J 5/0809 | .... | { using plane or convex mirrors, parallel phase plates or particular reflectors} |
| G01J 5/0812 | .... | { using attenuators} |
| G01J 5/0815 | .... | { using light concentrators, collectors or condensers} |
| G01J 5/0818 | | { using waveguides, rods or tubes} |
| G01J 5/0821 | | { using optical fibers} |
| G01J 5/0825 | | { using polarizing elements} |

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| G01J 5/0828 | | { using notch filters} |
| G01J 5/0831 | | { using masks, e.g. structured apertures, using aperture plates or using spatial light modulators or spatial filters, e.g. reflective filters} |
| G01J 5/0834 | .... | { using shutters or modulators} |
| G01J 5/0837 | .... | { using micro-antennas, e.g. bow-tie} |
| G01J 5/084 | .... | { Adjustable, slidable} |
| G01J 5/0843 | ..... | { Manually adjustable} |
| G01J 5/0846 | .... | { using multiple detectors for performing different types of detection, e.g. radiometry and reflectometry channels} |
| G01J 5/085 | .... | { having a throughhole enabling the optical element to fulfil an additional optical function, e.g. a mirror or grating having a throughhole for a light collecting or light injecting optical fiber} |
| G01J 5/0853 | .... | { using infrared absorbers other than the usual absorber layers deposited on infrared detectors like bolometers, wherein the heat propagation between the absorber and the detecting element occurs within a solid} |
| G01J 5/0856 | .... | { Slit arrangements} |
| G01J 5/0859 | .... | { using a sighting arrangement, or a camera for the same purpose} |
| G01J 5/0862 | .... | { using optical filters (G01J 5/602 , G01J 5/0828 take precedence)} |
| G01J 5/0865 | .... | { using means for replacing an element by another, e.g. for replacing a filter} |
| G01J 5/0868 | .... | { using means for illuminating a slit or a surface efficiently, e.g. entrance slit of a pyrometer or entrance face of a fiber} |
| G01J 5/0871 | .... | { Beam switching arrangements; Photodetection involving different fields of view for a single detector} |
| G01J 5/0875 | .... | { Windows or their fastening arrangements} |
| G01J 5/0878 | .... | { Diffusers} |
| G01J 5/0881 | ... | { Compact construction} |
| G01J 5/0884 | .... | { Monolithic} |
| G01J 5/0887 | ... | { Integrating cavities mimicking black bodies, wherein the heat propagation between the black body and the measuring element does not occur within a solid; Use of bodies placed inside the fluid stream for measurement of the temperature of gases; Use of the reemission from a surface, e.g. reflective surface; Emissivity enhancement by multiple reflections} |
| G01J 5/089 | ... | { Field-of-view determination; Aiming or pointing of a pyrometer; Adjusting alignment; Encoding angular position; Size of the measuring area; Position tracking} |
| G01J 5/0893 | ... | { Arrangements to attach devices to a pyrometer, i.e. attaching an optical interface; Spatial relative arrangement of optical elements, e.g. folded beam path (G01J 5/049 takes precedence)} |
| G01J 5/0896 | ... | { using a light source, e.g. for illuminating a surface} |
| G01J 5/10 | . | using electric radiation detectors |
| G01J 2005/103 | .. | {Absorbing heated plate or film and temperature detector } |
| G01J 2005/106 | .. | {Arrays } |
| G01J 5/12 | .. | using thermoelectric elements, e.g. thermocouples (thermoelectric elements per se H01L 35/00 , H01L 37/00) |
| G01J 2005/123 | ... | {Thermoelectric array } |

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| G01J 2005/126 | ... | {Thermoelectric black plate and thermocouple } |
| G01J 5/14 | ... | Electrical features |
| G01J 5/16 | .... | Arrangements with respect to the cold junction; Compensating influence of ambient temperature or other variables |
| G01J 5/18 | .... | Special adaptation for indicating or recording (indicating or recording measured values in general G01D) |
| G01J 5/20 | .. | using resistors, thermistors, or semi-conductors sensitive to radiation |
| G01J 2005/202 | ... | {Arrays } |
| G01J 2005/204 | .... | {prepared by semiconductor processing, e.g. VLSI } |
| G01J 2005/206 | ... | {on foils } |
| G01J 2005/208 | ... | {superconductive } |
| G01J 5/22 | ... | Electrical features |
| G01J 5/24 | .... | Use of a specially-adapted circuit, e.g. bridge circuit |
| G01J 5/26 | .... | Special adaptation for indicating or recording (indicating or recording measured values in general G01D) |
| G01J 5/28 | .. | using photo-emissive, photo-conductive, or photo-voltaic cells |
| G01J 2005/283 | ... | {Array } |
| G01J 2005/286 | .... | {Arrangement of conductor therefor } |
| G01J 5/30 | ... | Electrical features |
| G01J 5/32 | .... | Special adaptation for indicating or recording (indicating or recording measured values in general G01D) |
| G01J 5/34 | .. | using capacitors {e.g. pyroelectric elements} |
| G01J 2005/345 | ... | {Arrays } |
| G01J 5/36 | .. | using ionisation of gases |
| G01J 5/38 | . | using extension or expansion of solids or fluids |
| G01J 5/40 | .. | using bimetallic elements |
| G01J 5/42 | .. | using Golay cells |
| G01J 2005/425 | ... | {Micro-array } |
| G01J 5/44 | .. | using change of resonant frequency, e.g. of piezo-electric crystal |
| G01J 5/46 | . | using radiation pressure or radiometer effect |
| G01J 5/48 | . | using wholly visual means |
| G01J 5/50 | . | using techniques specified in the subgroups below |
| G01J 5/505 | .. | {using photographic recording} |
| G01J 5/52 | .. | using comparison with reference sources, e.g. disappearing-filament pyrometer |
| G01J 5/522 | ... | {Reference sources, e.g. standard lamps; Black bodies} |
| G01J 5/524 | ... | {using a reference heater of the emissive surface type, e.g. for selectively absorbing materials} |
| G01J 2005/526 | ... | {Periodic insertion of emissive surface } |
| G01J 2005/528 | ... | {Periodic comparison } |
| G01J 5/54 | ... | Optical features |
| G01J 5/56 | ... | Electrical features |

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| G01J 5/58 | .. | using absorption; using polarisation; using extinction effect |
| G01J 2005/583 | ... | {Interferences, i.e. fringe variation with temperature } |
| G01J 2005/586 | ... | {Polarisation } |
| G01J 5/60 | .. | using determination of colour temperature {Pyrometry using two wavelengths filtering; using selective, monochromatic or bandpass filtering; using spectral scanning} |
| G01J 5/601 | ... | {using spectral scanning} |
| G01J 5/602 | ... | {using selective, monochromatic or bandpass filtering} |
| G01J 2005/604 | .... | {bandpass filtered } |
| G01J 5/605 | ... | {using visual determination} |
| G01J 2005/607 | ... | {on two separate detectors } |
| G01J 2005/608 | ... | {Colour temperature of lamps, sources or the like } |
| G01J 5/62 | .. | using means for chopping the light {Compensation for background radiation of chopper element} |
| G01J 2005/623 | ... | {Compensating radiation of chopper } |
| G01J 2005/626 | ... | {Electrooptic chopper } |

G01J 7/00 Measuring velocity of light

G01J 9/00 Measuring optical phase difference (devices or arrangements for controlling the phase of light beams [G02F 1/01](#)); Determining degree of coherence; Measuring optical wavelength (spectrometry [G01J 3/00](#))

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| G01J 2009/002 | . | {Wavefront phase distribution } |
| G01J 2009/004 | . | {Mode pattern } |
| G01J 2009/006 | . | {using pulses for physical measurements } |
| G01J 2009/008 | .. | {using decay time in cavity } |
| G01J 9/02 | . | by interferometric methods (using interferometers for measuring optically the linear dimensions of objects G01B 9/02) |
| G01J 2009/0203 | .. | {Phased array of beams } |
| G01J 2009/0207 | .. | {Double frequency, e.g. Zeeman } |
| G01J 2009/0211 | .. | {for measuring coherence } |
| G01J 9/0215 | .. | {by shearing interferometric methods} |
| G01J 2009/0219 | ... | {using two or more gratings } |
| G01J 2009/0223 | .. | {Common path interferometry; Point diffraction interferometry } |
| G01J 2009/0226 | .. | {Fibres } |
| G01J 2009/023 | ... | {of the integrated optical type } |
| G01J 2009/0234 | .. | {Measurement of the fringe pattern } |
| G01J 2009/0238 | ... | {the pattern being processed optically, e.g. by Fourier transformation } |
| G01J 2009/0242 | .. | {Compensator } |
| G01J 9/0246 | .. | {Measuring optical wavelength} |
| G01J 2009/0249 | .. | {with modulation } |
| G01J 2009/0253 | ... | {of wavelength } |

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| G01J 2009/0257 | .. {multiple, e.g. Fabry Perot interferometer } |
| G01J 2009/0261 | .. {polarised } |
| G01J 2009/0265 | ... {with phase modulation } |
| G01J 2009/0269 | .. {Microscope type } |
| G01J 2009/0273 | .. {Ring interferometer } |
| G01J 2009/0276 | .. {Stellar interferometer, e.g. Sagnac } |
| G01J 2009/028 | .. {Types } |
| G01J 2009/0284 | ... {Michelson } |
| G01J 2009/0288 | ... {Machzehnder } |
| G01J 2009/0292 | ... {Fizeau; Wedge } |
| G01J 2009/0296 | ... {achromatic } |
| G01J 9/04 | . by beating two waves of a same source but of different frequency and measuring the phase shift of the lower frequency obtained |
| G01J 11/00 | Measuring the characteristics of individual optical pulses or of optical pulse trains |
| G01J 2011/005 | . {Streak cameras } |