

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

1. This subclass covers the detection of the presence or absence of infra-red, visible, or ultra-violet light, not otherwise provided for.
2. 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}

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}

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}

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}

- 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}

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}

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}

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](#)

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}

- 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)

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}

- 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](#))}

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}

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}

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

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](#))

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}

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}