

CPC COOPERATIVE PATENT CLASSIFICATION

G PHYSICS

(NOTES omitted)

INSTRUMENTS

G01 MEASURING; TESTING

(NOTES omitted)

G01J MEASUREMENT OF INTENSITY, VELOCITY, SPECTRAL CONTENT, POLARISATION, PHASE OR PULSE CHARACTERISTICS OF INFRARED, VISIBLE OR ULTRAVIOLET LIGHT; COLORIMETRY; RADIATION PYROMETRY (light sources [F21](#), [H01J](#), [H01K](#), [H05B](#); investigating properties of materials by optical means [G01N](#))

NOTES

1. This subclass covers the detection of the presence or absence of infrared, visible, or ultraviolet light, not otherwise provided for.
2. Attention is drawn to the Notes following the title of class [G01](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

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 })	2001/0276	. . . {Protection}
		2001/028	. . . {against liquid}
		2001/0285	. . . {against laser damage}
1/02	. Details	1/029	. . . {Multi-channel photometry}
1/0204	. . {Compact construction}	1/0295	. . {Constructional arrangements for removing other types of optical noise or for performing calibration}
1/0209	. . . {Monolithic}	1/04	. . Optical or mechanical part {supplementary adjustable parts}
1/0214	. . {Constructional arrangements for removing stray light}	1/0403	. . . {Mechanical elements; Supports for optical elements; Scanning arrangements}
1/0219	. . {Electrical interface; User interface}	1/0407	. . . {Optical elements not provided otherwise, e.g. manifolds, windows, holograms, gratings}
1/0223	. . {Sample holders for photometry}	1/0411	. . . . {using focussing or collimating elements, i.e. lenses or mirrors; Aberration correction}
1/0228	. . {Control of working procedures; Failure detection; Spectral bandwidth calculation}	1/0414	. . . . {using plane or convex mirrors, parallel phase plates, or plane beam-splitters}
1/0233	. . {Handheld}	1/0418	. . . . {using attenuators}
1/0238	. . {making use of sensor-related data, e.g. for identification of sensor or optical parts}	1/0422	. . . . {using light concentrators, collectors or condensers}
1/0242	. . {Control or determination of height or angle information of sensors or receivers; Goniophotometry}	1/0425	. . . . {using optical fibers}
1/0247	. . {using a charging unit}	1/0429	. . . . {using polarisation elements}
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)} 2001/0257 . . {portable}	1/0433	. . . . {using notch filters}
2001/0261	. . . {Pocket size; Card size}	1/0437	. . . . {using masks, aperture plates, spatial light modulators, spatial filters, e.g. reflective filters}
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}	1/044	. . . . {using shutters}
		1/0444	. . . . {using means for replacing an element by another, e.g. for replacing a filter or grating}
1/0271	. . {Housings; Attachments or accessories for photometers}	1/0448	. . . . {Adjustable, e.g. focussing}
		1/0451	. . . . {using means for illuminating a slit efficiently, e.g. entrance slit of a photometer or entrance face of fiber}

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}	2001/1652	. . . . {one detector being transparent before the other one}
1/0459	. . . . {using an optical amplifier of light or coatings to improve optical coupling}	2001/1657	. . . . {one signal being spectrally modified, e.g. for UV}
1/0462	. . . . {Slit arrangements}	2001/1663	. . . . {two detectors of different sensitivity}
1/0466	. . . . {with a sighting port}	2001/1668	. . . . {the measuring signal itself varying in time, e.g. periodic, for example blood pulsation}
1/047	. . . . {using extension/expansion of solids or fluids, change of resonant frequency or extinction effect}	2001/1673	. . . . {using a reference sample}
1/0474	. . . . {Diffusers (cavities G01J 2001/0481)}	2001/1678	. . . . {Comparing time separated signals, i.e. chopped}
1/0477	. . . . {Prisms, wedges}	2001/1684	. . . . {and selecting also a DC level from the signal}
2001/0481	. . . . {Preset integrating sphere or cavity}	2001/1689	. . . . {one separated signal being processed differently}
2001/0485	. . . . {Cosinus correcting or purposely modifying the angular response of a light sensor}	2001/1694	. . . . {with a signal from on/off switched light source}
1/0488	. . . . {with spectral filtering}	1/18	. . . . using comparison with a reference electric value
1/0492	. . . . {using at least two different filters}	2001/182	. . . . {with SH sample and hold circuits}
2001/0496	. . . . {using fiber Bragg gratings}	2001/184	. . . . {on a succession of signals}
1/06	. . . . Restricting the angle of incident light	2001/186	. . . . {Comparison or correction from an electric source within the processing circuit}
2001/061	. . . . {Baffles}	2001/188	. . . . {on pulse train}
2001/062	. . . . {by fibre-optic packed bundle}	1/20	. . . . intensity of the measured or reference value being varied to equalise their effects at the detectors, e.g. by varying incidence angle
2001/063	. . . . {with selectable field of view}	1/22	. . . . using a variable element in the light-path, e.g. filter, polarising means (G01J 1/34 takes precedence)
2001/065	. . . . . {by changing elements}	1/24	. . . . using electric radiation detectors
2001/066	. . . . . {with an aiming optical device}	2001/242	. . . . . {Filter wheel, i.e. absorption filter series graduated}
2001/067	. . . . . {for angle scan}	2001/245	. . . . . {with two or more separate attenuated steps}
2001/068	. . . . . {by diaphragm or the like}	2001/247	. . . . . {of spectral wedge type}
1/08	. . . . Arrangements of light sources specially adapted for photometry {standard sources, also using luminescent or radioactive material}	1/26	. . . . . adapted for automatic variation of the measured or reference value (regulation of light intensity G05D 25/00)
2001/083	. . . . {Testing response of detector}	1/28	. . . . using variation of intensity or distance of source (G01J 1/34 takes precedence)
2001/086	. . . . {Calibrating drift correction}	1/30	. . . . using electric radiation detectors
1/10	. . . . by comparison with reference light or electric value {provisionally void}	1/32	. . . . . adapted for automatic variation of the measured or reference value (regulation of light intensity G05D 25/00)
1/12	. . . . using wholly visual means (G01J 1/20 takes precedence)	1/34	. . . . using separate light paths used alternately or sequentially, e.g. flicker
1/122	. . . . {Visual exposure meters for determining the exposure time in photographic recording or reproducing}	1/36	. . . . using electric radiation detectors
1/124	. . . . . {based on the comparison of the intensity of measured light with a comparison source or comparison illuminated surface}	2001/363	. . . . . {Chopper stabilisation}
1/126	. . . . . {for enlarging apparatus}	2001/366	. . . . . {Balancing two paths}
1/128	. . . . . {for copy- or printing apparatus}	1/38	. . . . using wholly visual means (G01J 1/10 takes precedence)
1/14	. . . . using comparison with a surface of graded brightness, {(e.g. for view taking; for analytical applications G01N 21/293)}	1/40	. . . . using limit or visibility or extinction effect
1/16	. . . . using electric radiation detectors (G01J 1/20 takes precedence)	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)
2001/1605	. . . . {Null method}	1/4204	. . . . {with determination of ambient light (solar light G01J 2001/4266)}
2001/161	. . . . {Ratio method, i.e. I_m/I_r }	1/4209	. . . . {Photoelectric exposure meters for determining the exposure time in recording or reproducing}
2001/1615	. . . . . {Computing a difference/sum ratio, i.e. $(I_m - I_r) / (I_m + I_r)$ }	1/4214	. . . . {specially adapted for view-taking apparatus}
2001/1621	. . . . . {Comparing a duty ratio of pulses}	1/4219	. . . . {specially adapted for enlargers}
1/1626	. . . . {Arrangements with two photodetectors, the signals of which are compared}	1/4223	. . . . {specially adapted for copy - or printing apparatus}
2001/1631	. . . . . {Bridge circuit}		
2001/1636	. . . . . {one detector directly monitoring the source, e.g. also impulse time controlling}		
2001/1642	. . . . . {and acting on the detecting circuit}		
2001/1647	. . . . . {one signal maintained constant}		

- 1/4228 . . {arrangements with two or more detectors, e.g. for sensitivity compensation}
- 2001/4233 . . . {with selection of detector}
- 2001/4238 . . {Pulsed light}
- 2001/4242 . . {Modulated light, e.g. for synchronizing source and detector circuit}
- 2001/4247 . . {for testing lamps or other light sources}
- 2001/4252 . . . {for testing LED's}
- 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)}
- 2001/4261 . . . {Scan through beam in order to obtain a cross-sectional profile of the beam}
- 2001/4266 . . {for measuring solar light}
- 2001/4271 . . . {Pyrrheliometer}
- 2001/4276 . . . {Solar energy integrator over time}
- 2001/428 . . . {for sunlight scattered by atmosphere}
- 2001/4285 . . . {Pyranometer, i.e. integrating over space}
- 1/429 . . {applied to measurement of ultraviolet light (using counting tubes G01T)}
- 2001/4295 . . {using a physical effect not covered by other subgroups of G01J 1/42}
- 1/44 . . Electric circuits {(for command of an exposure part G03B 7/02)}
- 2001/4406 . . . {Plural ranges in circuit, e.g. switchable ranges; Adjusting sensitivity selecting gain values}
- 2001/4413 . . . {Type}
- 2001/442 {Single-photon detection or photon counting}
- 2001/4426 {with intensity to frequency or voltage to frequency conversion [IFC or VFC]}
- 2001/4433 {Peak sensing}
- 2001/444 . . . {Compensating; Calibrating, e.g. dark current, temperature drift, noise reduction or baseline correction; Adjusting}
- 2001/4446 . . . {Type of detector}
- 2001/4453 {PMT}
- 2001/446 {Photodiode}
- 2001/4466 {Avalanche}
- 2001/4473 {Phototransistor}
- 2001/448 {Array [CCD]}
- 2001/4486 {Streak tube}
- 2001/4493 {with image intensifier tube [IIT]}
- 1/46 . . . using a capacitor
- 1/48 . . using chemical effects
- 1/50 . . using change in colour of an indicator, e.g. actinometer
- 1/52 . . using photographic effects
- 1/54 . . by observing photo-reactions between gases
- 1/56 . . using radiation pressure or radiometer effect
- 1/58 . . using luminescence generated by light
- 1/60 . . by measuring the pupil of the eye
- 3/00 Spectrometry; Spectrophotometry; Monochromators; Measuring colours**
- 2003/003 . . {Comparing spectra of two light sources}
- 2003/006 . . {Fundamentals or review articles}
- 3/02 . . Details
- 3/0202 . . {Mechanical elements; Supports for optical elements}
- 3/0205 . . {Optical elements not provided otherwise, e.g. optical manifolds, diffusers, windows}
- 3/0208 {using focussing or collimating elements, e.g. lenses or mirrors; performing aberration correction}
- 3/021 {using plane or convex mirrors, parallel phase plates, or particular reflectors}
- 3/0213 {using attenuators}
- 3/0216 {using light concentrators or collectors or condensers}
- 3/0218 {using optical fibers}
- 3/0221 {the fibers defining an entry slit}
- 3/0224 {using polarising or depolarising elements}
- 3/0227 {using notch filters}
- 3/0229 {using masks, aperture plates, spatial light modulators or spatial filters, e.g. reflective filters}
- 3/0232 {using shutters}
- 3/0235 {using means for replacing an element by another, for replacing a filter or a grating}
- 3/0237 {Adjustable, e.g. focussing}
- 3/024 {using means for illuminating a slit efficiently (e.g. entrance slit of a spectrometer or entrance face of fiber)}
- 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}
- 3/0245 {using an optical amplifier of light, e.g. doped fiber}
- 3/0248 {using a sighting port, e.g. camera or human eye}
- 3/0251 {Colorimeters making use of an integrating sphere}
- 3/0254 {Spectrometers, other than colorimeters, making use of an integrating sphere}
- 3/0256 . . . {Compact construction}
- 3/0259 {Monolithic}
- 3/0262 . . . {Constructional arrangements for removing stray light}
- 3/0264 . . . {Electrical interface; User interface}
- 3/0267 . . . {Sample holders for colorimetry}
- 3/027 . . . {Control of working procedures of a spectrometer; Failure detection; Bandwidth calculation}
- 3/0272 . . . {Handheld}
- 3/0275 . . . {making use of sensor-related data, e.g. for identification of sensor parts or optical elements}
- 3/0278 . . . {Control or determination of height or angle information for sensors or receivers}
- 2003/0281 . . . {slitless}
- 3/0283 . . . {using a charging unit}
- 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}
- 3/0289 . . . {Field-of-view determination; Aiming or pointing of a spectrometer; Adjusting alignment; Encoding angular position; Size of measurement area; Position tracking}
- 3/0291 . . . {Housings; Spectrometer accessories; Spatial arrangement of elements, e.g. folded path arrangements}

- 3/0294 . . {Multi-channel spectroscopy}
- 3/0297 . . {Constructional arrangements for removing other types of optical noise or for performing calibration}
- 3/04 . . Slit arrangements {slit adjustment}
- 2003/042 . . . {Slit wheel}
- 2003/045 . . . {Sequential slits; Multiple slits}
- 2003/047 . . . {Configuration of two or more entry or exit slits for predetermined delta-lambda}
- 3/06 . . Scanning arrangements {arrangements for order-selection}
- 2003/061 . . . {Mechanisms, e.g. sine bar}
- 2003/062 . . . {motor-driven}
- 2003/063 {Step motor}
- 2003/064 . . . {Use of other elements for scan, e.g. mirror, fixed grating}
- 2003/065 {Use of fibre scan for spectral scan}
- 2003/066 . . . {Microprocessor control of functions, e.g. slit, scan, bandwidth during scan}
- 2003/067 . . . {Use of plane parallel plate, e.g. small scan, wobble}
- 2003/068 . . . {tuned to preselected wavelengths}
- 2003/069 . . . {Complex motion, e.g. rotation of grating and correcting translation}
- 3/08 . . Beam switching arrangements
- 3/10 . . Arrangements of light sources specially adapted for spectrometry or colorimetry
- 2003/102 {Plural sources}
- 2003/104 {Monochromatic plural sources}
- 2003/106 {the two sources being alternating or selectable, e.g. in two ranges or line:continuum}
- 3/108 . . . {for measurement in the infrared range}
- 3/12 . Generating the spectrum; Monochromators
- 2003/1204 . . {Grating and filter}
- 2003/1208 . . {Prism and grating}
- 2003/1213 . . {Filters in general, e.g. dichroic, band}
- 2003/1217 . . . {Indexed discrete filters or choppers}
- 2003/1221 . . . {Mounting; Adjustment}
- 2003/1226 . . {Interference filters}
- 2003/123 . . . {Indexed discrete filters}
- 2003/1234 . . . {Continuously variable IF [CVIF]; Wedge type}
- 2003/1239 . . . {and separate detectors}
- 2003/1243 . . . {Pivoting IF or other position variation}
- 2003/1247 . . . {Tuning}
- 2003/1252 . . . {Using "resonance cell", e.g. Na vapor}
- 3/1256 . . {using acousto-optic tunable filter; [\(acousto-optic elements or systems G02F 1/11, G02F 1/33\)](#)}
- 2003/126 . . {Focal isolation type}
- 2003/1265 . . {the wavelengths being separated in time, e.g. through optical fibre array}
- 2003/1269 . . {Electrooptic filter}
- 2003/1273 . . {Order selection}
- 2003/1278 . . {Mask with spectral selection}
- 2003/1282 . . {Spectrum tailoring}
- 2003/1286 . . {Polychromator in general}
- 2003/1291 . . {polarised, birefringent}
- 2003/1295 . . {Plural entry slits, e.g. for different incidences}
- 3/14 . . using refracting elements, e.g. prisms [\(G01J 3/18, G01J 3/26 take precedence {prisms per se G02B 5/04}\)](#)
- 2003/145 . . . {Prism systems for straight view}
- 3/16 . . . with autocollimation
- 3/18 . . using diffraction elements, e.g. grating [\(gratings per se G02B\)](#)
- 3/1804 . . . {Plane gratings}
- 3/1809 . . . {Echelle gratings}
- 2003/1814 . . . {Double monochromator}
- 2003/1819 {Double pass monochromator}
- 2003/1823 {subtractive}
- 2003/1828 . . . {with order sorter or prefilter}
- 3/1833 . . . {Grazing incidence}
- 3/1838 . . . {Holographic gratings}
- 2003/1842 . . . {Types of grating}
- 2003/1847 {Variable spacing}
- 2003/1852 {Cylindric surface}
- 2003/1857 {Toroid surface}
- 2003/1861 {Transmission gratings}
- 2003/1866 . . . {Monochromator for three or more wavelengths}
- 2003/1871 {Duochromator}
- 2003/1876 {Polychromator}
- 2003/188 . . . {Constant deviation}
- 2003/1885 . . . {Holder for interchangeable gratings, e.g. at different ranges of wavelengths}
- 3/189 . . . {using at least one grating in an off-plane configuration}
- 3/1895 . . . {using fiber Bragg gratings or gratings integrated in a waveguide}
- 3/20 . . . Rowland circle spectrometers
- 3/22 . . . Littrow mirror spectrometers
- 3/24 . . . using gratings profiled to favour a specific order
- 3/26 . . using multiple reflection, e.g. Fabry-Perot interferometer, variable interference filters
- 2003/262 {Double pass; Multiple pass}
- 2003/265 {Read out, e.g. polychromator}
- 2003/267 {of the SISAM type}
- 3/28 . Investigating the spectrum [\(using colour filters G01J 3/51\)](#)
- 3/2803 . . {using photoelectric array detector}
- 2003/2806 . . . {Array and filter array}
- 2003/2809 {Array and correcting filter}
- 2003/2813 . . . {2D-array}
- 2003/2816 . . . {Semiconductor laminate layer}
- 2003/282 . . . {Modified CCD or like}
- 3/2823 . . {Imaging spectrometer}
- 2003/2826 . . . {Multispectral imaging, e.g. filter imaging}
- 2003/283 . . {computer-interfaced}
- 2003/2833 . . . {and memorised spectra collection}
- 2003/2836 . . . {Programming unit, i.e. source and date processing}
- 2003/284 . . . {Spectral construction}
- 2003/2843 . . . {Processing for eliminating interfering spectra}
- 3/2846 . . {using modulation grid; Grid spectrometers}
- 2003/285 . . . {Hadamard transformation}
- 2003/2853 . . {Averaging successive scans or readings}
- 2003/2856 . . . {and calculation of standard deviation}
- 2003/2859 . . {Peak detecting in spectrum}
- 2003/2863 . . . {and calculating peak area}
- 2003/2866 . . {Markers; Calibrating of scan}
- 2003/2869 . . . {Background correcting}
- 2003/2873 . . . {Storing reference spectrum}
- 2003/2876 . . . {Correcting linearity of signal}

- 2003/2879 . . . {Calibrating scan, e.g. Fabry Perot interferometer}
- 2003/2883 . . . {Correcting overlapping}
- 2003/2886 . . {Investigating periodic spectrum}
- 3/2889 . . {Rapid scan spectrometers; Time resolved spectrometry}
- 2003/2893 . . . {with rotating grating}
- 2003/2896 . . {Vidicon, image intensifier tube}
- 3/30 . . Measuring the intensity of spectral lines directly on the spectrum itself ([G01J 3/42](#), [G01J 3/44 take precedence](#))
- 3/32 . . . Investigating bands of a spectrum in sequence by a single detector
- 2003/323 {Comparing line:background}
- 2003/326 {Scanning mask, plate, chopper, e.g. small spectrum interval}
- 3/36 . . . Investigating two or more bands of a spectrum by separate detectors
- 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](#))
- 3/42 . . Absorption spectrometry; Double beam spectrometry; Flicker spectrometry; Reflection spectrometry ([beam switching arrangements G01J 3/08](#))
- 2003/421 {Single beam}
- 2003/423 {Spectral arrangements using lasers, e.g. tunable}
- 2003/425 {Reflectance}
- 3/427 . . . Dual wavelengths spectrometry
- 2003/4275 {Polarised dual wavelength spectrometry}
- 3/433 . . . Modulation spectrometry; Derivative spectrometry
- 2003/4332 {frequency-modulated}
- 2003/4334 {by modulation of source, e.g. current modulation}
- 2003/4336 {by magnetic modulation, e.g. Zeeman effect}
- 3/4338 {Frequency modulated spectrometry}
- 3/44 . . Raman spectrometry; Scattering spectrometry {; Fluorescence spectrometry}
- 3/4406 . . . {Fluorescence spectrometry}
- 3/4412 . . . {Scattering spectrometry ([particle sizing by light scattering G01N 15/0205](#); [optical velocimetry of particles G01P 5/20](#), [G01P 5/26](#))}
- 2003/4418 {Power spectrum}
- 2003/4424 {Fluorescence correction for Raman spectrometry}
- 3/443 . . Emission spectrometry
- 2003/4435 {Measuring ratio of two lines, e.g. internal standard}
- 3/447 . . Polarisation spectrometry
- 3/45 . . Interferometric spectrometry
- 2003/451 {Dispersive interferometric spectrometry}
- 2003/452 {with recording of image of spectral transformation, e.g. hologram}
- 3/453 . . . by correlation of the amplitudes
- 3/4531 {Devices without moving parts}
- 3/4532 {Devices of compact or symmetric construction ([G01J 3/4531 takes precedence](#))}
- 2003/4534 {Interferometer on illuminating side}
- 3/4535 {Devices with moving mirror ([G01J 3/4532 takes precedence](#))}
- 3/4537 {Devices with refractive scan}
- 2003/4538 {Special processing}
- 3/457 . . Correlation spectrometry, e.g. of the intensity ([G01J 3/453 takes precedence](#))
- 3/46 . . Measurement of colour; Colour measuring devices, e.g. colorimeters ([measuring colour temperature G01J 5/60](#))
- 3/461 . . {with colour spinners}
- 3/462 . . {Computing operations in or between colour spaces; Colour management systems}
- 3/463 . . {Colour matching}
- 3/465 . . {taking into account the colour perception of the eye; using tristimulus detection}
- 2003/466 . . {Coded colour; Recognition of predetermined colour; Determining proximity to predetermined colour}
- 2003/467 . . {Colour computing}
- 2003/468 . . {of objects containing fluorescent agent}
- 3/50 . . using electric radiation detectors
- 3/501 . . . {Colorimeters using spectrally-selective light sources, e.g. LEDs}
- 3/502 . . . {using a dispersive element, e.g. grating, prism}
- 2003/503 {Densitometric colour measurements}
- 3/504 {Goniometric colour measurements, for example measurements of metallic or flake based paints}
- 3/505 {measuring the colour produced by lighting fixtures other than screens, monitors, displays or CRTs}
- 3/506 {measuring the colour produced by screens, monitors, displays or CRTs}
- 2003/507 {the detectors being physically selective}
- 3/508 {measuring the colour of teeth}
- 3/51 . . . using colour filters
- 3/513 {having fixed filter-detector pairs}
- 2003/516 {with several stacked filters or stacked filter-detector pairs}
- 3/52 . . . using colour charts
- 3/522 {circular colour charts}
- 3/524 {Calibration of colorimeters}
- 3/526 {for choosing a combination of different colours, e.g. to produce a pleasing effect for an observer}
- 3/528 {using colour harmony theory}
- 4/00 Measuring polarisation of light**
- 4/02 . . Polarimeters of separated-field type; Polarimeters of half-shadow type
- 4/04 . . Polarimeters using electric detection means ([G01J 4/02 takes precedence](#))
- 5/00 Radiation pyrometry, e.g. infrared or optical thermometry**
- 5/0003 . . {for sensing the radiant heat transfer of samples, e.g. emittance meter}
- 5/0007 . . {of wafers or semiconductor substrates, e.g. using Rapid Thermal Processing}
- 5/0011 . . {Ear thermometers ([G01J 5/021 and G01J 5/049 take precedence](#))}
- 5/0014 . . {for sensing the radiation from gases, flames}

- 5/0018 . . {Flames, plasma or welding}
- 5/0022 . {for sensing the radiation of moving bodies}
- 5/0025 . . {Living bodies ([ear thermometers G01J 5/0011](#); [detecting, measuring or recording for diagnostic purposes A61B 5/00](#))}
- 2005/0029 . . {Sheet}
- 2005/0033 . . {Wheel}
- 5/0037 . {for sensing the heat emitted by liquids}
- 5/004 . . {by molten metals}
- 5/0044 . {Furnaces, ovens, kilns ([G01J 5/0007](#), [G01J 5/004](#) take precedence)}
- 5/0066 . {for hot spots detection}
- 5/007 . {for earth observation}
- 2005/0074 . {having separate detection of emissivity}
- 2005/0077 . {Imaging}
- 5/0088 . {in turbines}
- 2005/0092 . {Temperature by averaging, e.g. by scan}
- 5/0096 . {for measuring wires, electrical contacts or electronic systems}
- 5/02 . Constructional details
- 5/0205 . . {Mechanical elements; Supports for optical elements}
- 5/021 . . {Probe covers for thermometers, e.g. tympanic thermometers; Containers for probe covers; Disposable probes}
- 5/0215 . . {Compact construction}
- 5/022 . . . {Monolithic}
- 5/0225 . . {Shape of the cavity itself or of elements contained in or suspended over the cavity}
- 5/023 . . . {Particular leg structure or construction or shape; Nanotubes}
- 5/0235 . . . {Spacers, e.g. for avoidance of stiction}
- 5/024 . . . {Special manufacturing steps or sacrificial layers or layer structures}
- 5/0245 . . . {for performing thermal shunt}
- 5/025 . . {Interfacing a pyrometer to an external device or network; User interface}
- 5/0255 . . {Sample holders for pyrometry; Cleaning of sample ([using a gas purge G01J 5/051](#))}
- 5/026 . . {Control of working procedures of a pyrometer, other than calibration; Bandwidth calculation; Gain control}
- 5/0265 . . {Handheld, portable ([ear thermometers G01J 5/049](#))}
- 5/027 . . {making use of sensor-related data, e.g. for identification of sensor parts or optical elements}
- 5/0275 . . {Control or determination of height or distance or angle information for sensors or receivers}
- 5/028 . . {using a charging unit or battery}
- 5/0295 . . {Nulling devices or absolute detection}
- 5/03 . . Arrangements for indicating or recording specially adapted for radiation pyrometers
- 5/04 . . Casings
- 5/041 . . . {Mountings in enclosures or in a particular environment}
- 5/042 {High-temperature environment ([G01J 5/0007](#), [G01J 5/0044](#), [G01J 5/0088](#) and [G01J 5/004](#) take precedence)}
- 5/044 {Environment with strong vibrations or shocks}
- 5/045 {Sealings; Vacuum enclosures; Encapsulated packages; Wafer bonding structures; Getter arrangements ([getter arrangements per se H10W 76/48](#), [H10P 36/03](#))}
- 5/046 {Materials; Selection of thermal materials}
- 5/047 {Mobile mounting; Scanning arrangements}
- 5/048 {Protective parts}
- 5/049 {Casings for tympanic thermometers}
- 5/05 . . Means for preventing contamination of the components of the optical system; Means for preventing obstruction of the radiation path
- 5/051 {using a gas purge}
- 5/06 . . Arrangements for eliminating effects of disturbing radiation; Arrangements for compensating changes in sensitivity ([for adjusting of solid angle of collected radiation G01J 5/07](#); [means for wavelength selection G01J 5/0801](#))
- 5/061 by controlling the temperature of the apparatus or parts thereof, e.g. using cooling means or thermostats
- 2005/062 {Peltier}
- 2005/063 {Heating; Thermostating}
- 5/064 {Ambient temperature sensor; Housing temperature sensor; Constructional details thereof}
- 2005/065 {by shielding}
- 2005/066 {Differential arrangement, i.e. sensitive/not sensitive}
- 5/068 by controlling parameters other than temperature
- 5/07 . . Arrangements for adjusting the solid angle of collected radiation, e.g. adjusting or orienting field of view, tracking position or encoding angular position ([optical collimating elements G01J 5/0806](#))
- 5/08 . . Optical arrangements
- 5/0801 Means for wavelength selection or discrimination
- 5/0802 Optical filters
- 5/08021 {Notch filters}
- 5/0803 Arrangements for time-dependent attenuation of radiation signals
- 5/0804 Shutters
- 5/0805 Means for chopping radiation
- 5/0806 Focusing or collimating elements, e.g. lenses or concave mirrors
- 5/0808 Convex mirrors
- 5/0813 Planar mirrors; Parallel phase plates
- 5/0814 {Particular reflectors, e.g. faceted or dichroic mirrors}
- 5/0815 {Light concentrators, collectors or condensers}
- 5/0816 {using attenuators}
- 5/0818 Waveguides
- 5/0821 Optical fibres
- 5/0831 Masks; Aperture plates; Spatial light modulators
- 5/0837 {Microantennas, e.g. bow-tie}
- 5/084 {Adjustable or slidable}
- 5/0843 {Manually adjustable}
- 5/0846 {having multiple detectors for performing different types of detection, e.g. using radiometry and reflectometry channels}

- 5/085 . . . {having a through-hole enabling the optical elements to fulfil an additional optical function, e.g. mirrors or gratings having a through-hole for a light collecting or light injecting optical fiber}
- 5/0853 . . . {having 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}
- 5/0856 . . . {Slit arrangements}
- 5/0859 . . . {Sighting arrangements, e.g. cameras}
- 5/0865 . . . {having means for replacing an element of the arrangement by another of the same type, e.g. an optical filter}
- 5/0868 . . . {Means for illuminating a slit or a surface efficiently, e.g. entrance slit of a pyrometer or entrance face of a fiber}
- 5/0871 . . . {Beam switching arrangements; Photodetection involving different fields of view for a single detector}
- 5/0875 . . . Windows; Arrangements for fastening thereof
- 5/0878 . . . {Diffusers}
- 5/0879 . . . {Optical elements not provided otherwise, e.g. optical manifolds, holograms, cubic beamsplitters, non-dispersive prisms or particular coatings}
- 5/0881 . . . {Compact construction}
- 5/0884 {Monolithic}
- 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}
- 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](#))}
- 5/0896 . . . {using a light source, e.g. for illuminating a surface}
- 5/10 . . . using electric radiation detectors
- 2005/103 . . . {Absorbing heated plate or film and temperature detector}
- 2005/106 . . . {Arrays}
- 5/12 . . . using thermoelectric elements, e.g. thermocouples
- 2005/123 {Thermoelectric array}
- 2005/126 {Thermoelectric black plate and thermocouple}
- 5/14 . . . Electrical features thereof
- 5/16 Arrangements with respect to the cold junction; Compensating influence of ambient temperature or other variables
- 5/20 . . . using resistors, thermistors or semiconductors sensitive to radiation, e.g. photoconductive devices
- 2005/202 {Arrays}
- 2005/204 {prepared by semiconductor processing, e.g. VLSI}
- 2005/206 {on foils}
- 2005/208 {superconductive}
- 5/22 . . . Electrical features thereof
- 5/24 Use of specially adapted circuits, e.g. bridge circuits
- 5/28 . . . using photoemissive or photovoltaic cells
- 2005/283 {Array}
- 2005/286 {Arrangement of conductor therefor}
- 5/30 . . . Electrical features thereof
- 5/34 . . . using capacitors, e.g. pyroelectric capacitors
- 2005/345 {Arrays}
- 5/35 . . . Electrical features thereof
- 5/36 . . . using ionisation of gases
- 5/38 . . . using extension or expansion of solids or fluids
- 5/40 . . . using bimaterial elements
- 5/42 . . . using Golay cells
- 2005/425 {Microarray}
- 5/44 . . . using change of resonant frequency, e.g. of piezoelectric crystals
- 5/46 . . . using radiation pressure or radiometer effect
- 5/48 . . . Thermography; Techniques using wholly visual means
- 5/485 . . . {Temperature profile}
- 5/52 . . . using comparison with reference sources, e.g. disappearing-filament pyrometer
- 2005/526 . . . {Periodic insertion of emissive surface}
- 2005/528 . . . {Periodic comparison}
- 5/53 . . . Reference sources, e.g. standard lamps; Black bodies
- 5/532 {using a reference heater of the emissive surface type, e.g. for selectively absorbing materials}
- 5/54 . . . Optical arrangements
- 5/56 . . . Electrical features thereof
- 5/58 . . . using absorption; using extinction effect
- 2005/583 {Interferences, i.e. fringe variation with temperature}
- 5/59 . . . using polarisation; Details thereof
- 5/60 . . . using determination of colour temperature
- 5/601 {using spectral scanning}
- 5/602 {using selective, monochromatic or bandpass filtering}
- 2005/604 {bandpass filtered}
- 5/605 {using visual determination}
- 2005/607 {on two separate detectors}
- 2005/608 {Colour temperature of light sources}
- 5/70 . . . Passive compensation of pyrometer measurements, e.g. using ambient temperature sensing or sensing of temperature within housing
- 5/80 . . . Calibration ([using comparison with reference sources G01J 5/52](#))
- 5/802 {by correcting for emissivity}
- 5/804 {using atmospheric correction}
- 5/806 {by correcting for reflection of the emitter radiation}
- 5/808 {using linearising circuits}
- 5/90 . . . Testing, inspecting or checking operation of radiation pyrometers
- 7/00 Measuring velocity of light**
- 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}
- 2009/004 . {Mode pattern}
- 2009/006 . {using pulses for physical measurements}
- 2009/008 . . {using decay time in cavity}
- 9/02 . by interferometric methods (using interferometers for measuring optically the linear dimensions of objects [G01B 9/02](#))
- 2009/0203 . . {Phased array of beams}
- 2009/0207 . . {Double frequency, e.g. Zeeman}
- 2009/0211 . . {for measuring coherence}
- 9/0215 . . {by shearing interferometric methods}
- 2009/0219 . . . {using two or more gratings}
- 2009/0223 . . {Common path interferometry; Point diffraction interferometry}
- 2009/0226 . . {Fibres}
- 2009/023 . . . {of the integrated optical type}
- 2009/0234 . . {Measurement of the fringe pattern}
- 2009/0238 . . . {the pattern being processed optically, e.g. by Fourier transformation}
- 2009/0242 . . {Compensator}
- 9/0246 . . {Measuring optical wavelength}
- 2009/0249 . . {with modulation}
- 2009/0253 . . . {of wavelength}
- 2009/0257 . . {multiple, e.g. Fabry Perot interferometer}
- 2009/0261 . . {polarised}
- 2009/0265 . . . {with phase modulation}
- 2009/0269 . . {Microscope type}
- 2009/0273 . . {Ring interferometer}
- 2009/0276 . . {Stellar interferometer, e.g. Sagnac}
- 2009/028 . . {Types}
- 2009/0284 . . . {Michelson}
- 2009/0288 . . . {Machzehnder}
- 2009/0292 . . . {Fizeau; Wedge}
- 2009/0296 . . . {achromatic}
- 9/04 . by beating two waves of a same source but of different frequency and measuring the phase shift of the lower frequency obtained
- 11/00 Measuring the characteristics of individual optical pulses or of optical pulse trains**
- 2011/005 . {Streak cameras}