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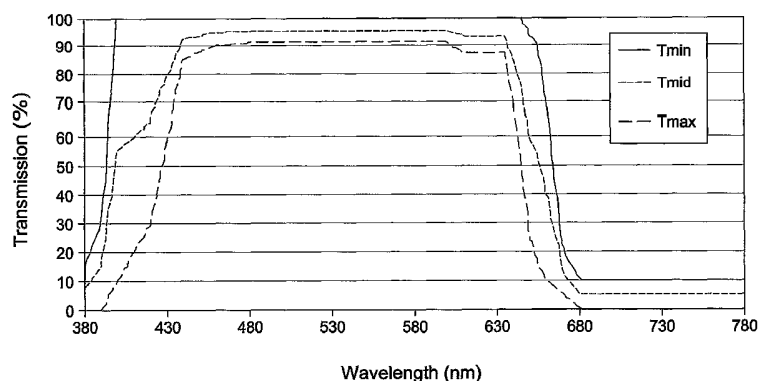
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COLOR COMPENSATING RETINAL SAFETY FILTER



(57) **Abstract:** A filter and method for filtering an optical beam are disclosed. One embodiment of the filter is an optical filter for filtering an incident light beam, comprising an optically effective material characterized by: a light transmittance of less than 1% for wavelengths below 420 nm; and a light transmittance for wavelengths complementary to wavelengths below 420 nm that, combined with the transmittance for wavelengths below 420 nm, will yield a filtered light beam having a luminosity of about 90% and an excitation purity of 5% or less. The complementary wavelengths can be wavelengths above about 640 nm, wavelengths above about 660 nm, and/or wavelengths from about 540 nm to about 560 nm. Further, in one embodiment the difference between the light transmittance just below 420 nm and the light transmittance just above 420 nm can be greater than 90%. Above 420 nm, in some embodiments, the light transmittance can be arbitrarily determined. The optically effective material can be optical-grade glass, an optical-grade plastic or polymer, a thin-film dielectric coating, or an optical-grade glass or plastic coated with a dielectric coating. The optical filter can be mounted downstream of an illumination source exit aperture, wherein the illumination source produces the incident light beam, and upstream of a site to be illuminated by the filtered light beam. Alternatively, the optical filter can be operably mounted on a set of viewing optics of a surgical microscope to filter a reflected portion of a light beam produced by an illumination source and used to illuminate a site, such as a surgical site.



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INTERNATIONAL SEARCH REPORT

Inter I application No
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A. CLASSIFICATION OF SUBJECT MATTER A61B3/00 A61F9/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) G02B		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the International search (name of data base and, where practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/38246 A (COMMISSARIAT A L'ENERGIE ATOMIQUE; ALM; FIRON, MURIEL; MONTERRAT, ERIC) 31 May 2001 (2001-05-31) the whole document	1-15, 29, 30
X	ANONYMOUS: "Hot Mirror HM-07 Transmission Data" OPTICAL-FILTERS.COM, [Online] 10 December 2003 (2003-12-10), XP002372667 Retrieved from the Internet: URL: http://web.archive.org/web/20031210001758/http://www.optical-filters.com/materials-hotmirrors.html > [retrieved on 2006-03-16]	1-6, 13, 14
Y	the whole document	29, 30
<div style="text-align: center;">----- -/--</div>		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents : <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&" document member of the same patent family</p>		
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Serra i Verdaguer, J

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Y	US 5 335 648 A (KOZAWA ET AL) 9 August 1994 (1994-08-09) abstract; figures	1-15,29, 30
Y	US 6 179 421 B1 (PANG KIAN TIONG) 30 January 2001 (2001-01-30) column 9, line 34 - column 15, line 6; figures	1-15,29, 30
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A	US 6 391 400 B1 (RUSSELL THOMAS A ET AL) 21 May 2002 (2002-05-21) figure 13	1-15,29, 30
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INTERNATIONAL SEARCH REPORT

International application No.
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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 16-28
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Diagnostic Method
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
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