

EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 1025

DATE: JANUARY 1, 2021

PROJECT RP0548

The following classification changes will be effected by this Notice of Changes:

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
SCHEME:		
Symbols New:	H01S	5/0087
Titles Changed:	H01S	5/00, 5/005, 5/0057, 5/0064, 5/0071, 5/0078, 5/0085, 5/0092, 5/14, 5/16, 5/36
Warnings New:	H01S	5/005, 5/0087
DEFINITIONS:		
Definitions New:	H01S	5/0087, 5/0092, 5/16
Definitions Modified:	H01S	5/00, 5/14, 5/36

This Notice of Changes includes the following [Check the ones included]:

1. CLASSIFICATION SCHEME CHANGES

- A. New, Modified or Deleted Group(s)
- B. New, Modified or Deleted Warning(s)
- C. New, Modified or Deleted Note(s)
- D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS

- A. New or Modified Definitions (Full definition template)
- B. Modified or Deleted Definitions (Definitions Quick Fix)

3. REVISION CONCORDANCE LIST (RCL)

4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

5. CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

SUBCLASS H01S – DEVICES USING THE PROCESS OF LIGHT AMPLIFICATION BY STIMULATED EMISSION OF RADIATION [LASER] TO AMPLIFY OR GENERATE LIGHT; DEVICES USING STIMULATED EMISSION OF ELECTROMAGNETIC RADIATION IN WAVE RANGES OTHER THAN OPTICAL

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	H01S 5/00	0	Semiconductor lasers (superluminescent diodes H01L33/00)	
C	H01S5/005	1	{Optical components external to the laser cavity, specially adapted therefor, e.g. for homogenisation or merging of the beams or for manipulating laser pulses, e.g. pulse shaping (H01S5/026, H01S5/18388 take precedence)}	H01S5/005, H01S5/0087
M	H01S5/0057	2	{for temporal shaping, e.g. pulse compression, frequency chirping}	
M	H01S5/0064	2	{Anti-reflection components, e.g. optical isolators}	
M	H01S5/0071	2	{for beam steering, e.g. using a mirror outside the cavity to change the beam direction}	
M	H01S5/0078	2	{for frequency filtering}	
M	H01S5/0085	2	{for modulating the output, i.e. the laser beam is modulated outside the laser cavity}	
N	H01S5/0087	2	{for illuminating phosphorescent or fluorescent materials, e.g. using optical arrangements specifically adapted for guiding or shaping laser beams illuminating these materials}	
M	H01S5/0092	2	{for nonlinear frequency conversion, e.g. second harmonic generation [SHG] or sum- or difference-frequency generation outside the laser cavity}	

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<u>Type*</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	H01S5/14	2	External cavity lasers (H01S5/18 takes precedence; mode locking H01S5/065)	
M	H01S5/16	2	Window-type lasers, i.e. with a region of non-absorbing material between the active region and the reflecting surface (H01S5/14 takes precedence)	
M	H01S5/36	2	comprising organic materials	

*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; T= existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:

- **No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required “anchor” symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types.
- “Transferred to” column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the “Transferred to” column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: “< administrative transfer to XX>”, “<administrative transfer to XX and YY simultaneously>”, or “<administrative transfer to XX, YY, ...and ZZ simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be “additional information”.
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations “ADD” or “INV”: <administrative transfer to XX ADD> , <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the “D” entries of 2000-series or Y-series groups may not require a destination (“Transferred to”) symbol, however it is required to specify “<no transfer>” in the “Transferred to” column for such cases.
- For finalisation projects, the deleted “F” symbols should have <no transfer> in the “Transferred to” column.
- For more details about the types of scheme change, see CPC Guide.

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B. New, Modified or Deleted Warning(s)

SUBCLASS H01S – DEVICES USING THE PROCESS OF LIGHT AMPLIFICATION BY STIMULATED EMISSION OF RADIATION [LASER] TO AMPLIFY OR GENERATE LIGHT; DEVICES USING STIMULATED EMISSION OF ELECTROMAGNETIC RADIATION IN WAVE RANGES OTHER THAN OPTICAL

<u>Type*</u>	<u>Location</u>	<u>Old Warning</u>	<u>New/Modified Warning</u>
N	H01S5/005		Group H01S5/005 is impacted by reclassification into group H01S5/0087. Groups H01S5/005 and H01S5/0087 should be considered in order to perform a complete search.
N	H01S5/0087		Group H01S5/0087 is incomplete pending reclassification of documents from group H01S5/005. Groups H01S5/005 and H01S5/0087 should be considered in order to perform a complete search.

*N = new warning, M = modified warning, D = deleted warning

NOTE: The "Location" column only requires the symbol PRIOR to the location of the warning. No further directions such as "before" or "after" are required.

2. A. DEFINITIONS (new)

Insert: The following new Definitions.

H01S 5/0087

Definition statement

This place covers:

- Optical arrangements that are specific for illuminating fluorescent or phosphorescent materials with radiation emitted from laser diodes.
- Specific arrangements of optical components that are used to guide laser diode beams onto fluorescent or phosphorescent materials like mirrors, lenses or waveguides or specific laser diode arrangements used to illuminate a fluorescent or phosphorescent material. Alternatively, the fluorescent or phosphorescent material may be part of the window of a laser diode package.

Relationships with other classification places

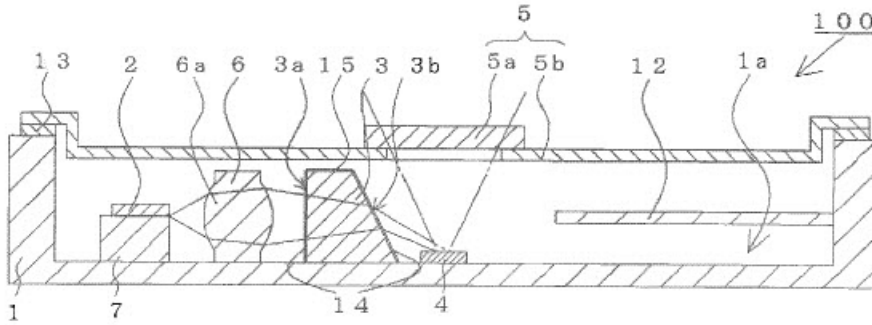
This subgroup does not cover specific compositions of phosphors or fluorescent materials. Neither does it cover specific applications of such a light source, like vehicle lamps comprising a laser diode as a black box, without any specific details on how the laser diode emission illuminates the fluorescent or phosphorescent material.

Multi-aspect classification of documents in different sub-classes is considered appropriate in case they disclose, for example, specific details of the laser diode arrangements to illuminate phosphors, a specific manufacturing of phosphors, as well as specific vehicle lamps comprising such light sources in the respective places of classification.

Examples of subject matter to be classified in H01S5/0087:

- Optical arrangements that are specific for illuminating fluorescent or phosphorescent materials with radiation emitted from laser diodes.

FIG. 2



- Specific arrangements of optical components.

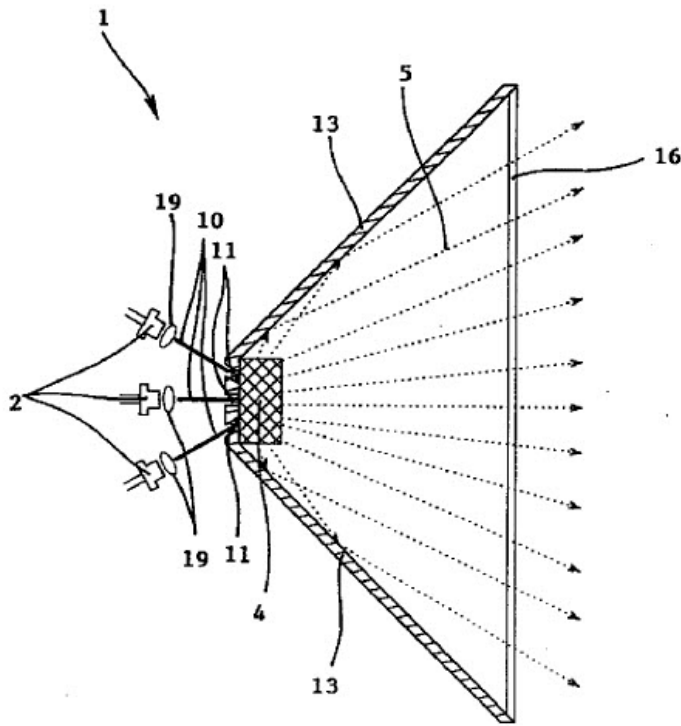


FIG. 3

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References**Application-oriented references**

Examples of places where the subject matter of this group is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Light sources using semiconductor devices, as light-generating elements, using wavelength conversion distinct from the light-generating elements	F21K 9/64
Lighting devices or systems specially adapted for vehicles with specific type of light source for headlamps	F21S 41/16

Informative references

Attention is drawn to the following places, which may be of interest for search:

Luminescent materials containing rare earth elements	C09K 11/77
Lighting devices or systems specially adapted for vehicles with specific type of light source for headlamps with phosphor and source being spaced apart	F21S 41/176
Light filters with selection of luminescent materials for screens for lightning devices, e.g. luminaires or lightning modules	F21V 9/30
Light generating elements of semiconductor light sources being semiconductor laser screens for lightning devices, e.g. luminaires or lightning modules	F21Y 2115/30
Projectors or projections type viewers with lamp houses characterized by using LED or laser light sources and secondary light emission	G03B 21/204

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H01S 5/0092

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Nonlinear frequency conversion per se	G02F 1/35
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H01S 5/16

References

Limiting references

This place does not cover:

External cavity lasers	H01S 5/14
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2. A. DEFINITIONS (modified)

H01S 5/00

Limiting references

Replace: The existing Limiting references table with the following new table.

Semiconductor devices with at least one potential-jump barrier or surface barrier specially adapted for light emission	H01L33/00
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Informative references

Insert: The following three new Informative reference table rows.

Construction or shape of optical resonators or components thereof	H01S3/08
Controlling the intensity, frequency, phase, polarisation or direction of the emitted radiation	H01S3/10
Stabilisation of laser output parameters	H01S3/13

H01S 5/14

References

Insert: The following new Limiting references section and table.

Limiting references

This place does not cover:

Surface-emitting [SE] lasers	H01S5/18
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Mode locking; Mode suppression; Mode selection	H01S5/065
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Informative references

Replace: The existing Informative references table with the following new table.

Construction or shape of optical resonators or components thereof	H01S3/08
Controlling the intensity, frequency, phase, polarisation or direction of the emitted radiation	H01S3/10
Stabilisation of laser output parameters	H01S3/13

[H01S 5/36](#)

References

Delete: The existing Limiting references section.

Insert: The following new Informative references section.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Dye lasers	H01S3/213
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3. REVISION CONCORDANCE LIST (RCL)

Type*	From CPC Symbol (existing)	To CPC Symbol(s)
C	H01S 5/005	H01S 5/005, H01S 5/0087

* C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed.

NOTES:

- Only C, D, F, and Q type entries are included in the table above.
- When multiple symbols are included in the “To” column, do not use ranges of symbols.
- For administrative transfer of documents, the following text should be used: “< administrative transfer to XX>”, “<administrative transfer to XX and YY simultaneously>”, or “<administrative transfer to XX, YY, ...and ZZ simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be “additional information”.
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations “ADD” or “INV”: <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the “D” entries of 2000-series or Y-series groups may not require a destination (“To”) symbol, however it is required to specify “<no transfer>” in the “To” column for such cases.
- RCL is not needed for finalisation projects.

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4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

<u>CPC</u>	<u>IPC</u>	<u>Action*</u>
H01S 5/0087	H01S 5/00	NEW

*Action column:

- For an (N) or (Q) entry, provide an IPC symbol and complete the Action column with “NEW.”
- For an existing CPC main trunk entry or indexing entry where the existing IPC symbol needs to be changed, provide an updated IPC symbol and complete the Action column with “UPDATED.”
- For a (D) CPC entry or indexing entry complete the Action column with “DELETE.” IPC symbol does not need to be included in the IPC column.
- For an (N) 2000 series CPC entry which is positioned within the main trunk scheme (breakdown code) provide an IPC symbol and complete the action column with “NEW”.
- For an (N) 2000 series CPC entry positioned at the end of the CPC scheme (orthogonal code), with no IPC equivalent, complete the IPC column with “CPCONLY” and complete the action column with “NEW”.

NOTES:

- F symbols are not included in the CICL table above.
- T and M symbols are not included in the CICL table above unless a change to the existing IPC is desired.