



**TC03109**

**Appeal number: TC/2012/03214**

*Customs Duty – classification – LED bulbs*

**FIRST-TIER TRIBUNAL  
TAX CHAMBER**

**ORLIGHT LIMITED**

**Appellant**

**- and -**

**THE COMMISSIONERS FOR HM  
REVENUE & CUSTOMS**

**Respondents**

**TRIBUNAL: JUDGE CHARLES HELLIER  
MICHAEL JAMES**

**Sitting in public at 45 Bedford Square WC1B on 16 October 2013**

**David Bedenham, counsel, instructed by Rosenblatt Solicitors for the Appellant**

**Matthew Donmall, counsel, instructed by the General Counsel and Solicitor to  
HM Revenue and Customs, for the Respondents**

## DECISION

1. This appeal concerns the customs tariff classification of LED light bulbs.

### 5 **The LED bulbs concerned.**

2. We were given an example of an 11 to 18 volt bulb, and had copies of product information for others. Kelly Dangoor, director of Orlight, gave oral evidence and showed us the bulbs and also other light fittings which used LEDs as a light source.

3. The bulbs at issue have an external shape similar to that of small halogen bulbs, but their light source comes, not from a glowing tungsten filament, but from a light emitting diode (an LED). They have a fluted cast casing broadly in the shape of a truncated cone about 2 inches tall, with a base diameter of 2 inches tapering to 1 1/4 inches. At the thin end there is a two pin plug, and at the wide end there is what appears to be a plastic lens through which light from one or more LEDs inside is emitted. From their shape and connections these bulbs can be seen to be intended to be used in place of halogen bulbs in ceiling downlights and similar applications. They are available for 240 volt or 11 to 18 volt operation.

4. Mr Dangoor was not a technical expert and could not give us very much detail about the internal mechanism of the bulbs. He said, and we accept, that within the bulbs is a (semiconductor) chip, called MTG2, which contained the light emitting diode or diodes. He accepted that within 240V bulb there is a device converting 240V into the 12V or so at which the light emitting diode circuits operate. It was not clear whether the transformer was part of the chip or a separate unit. It was also not clear whether the light emitting diode was an integral part of the semiconductor chip or whether it was attached to the chip.

### **The appeal**

5. Orlight appeals against a decision of HMRC of 12 October 2011 enclosing a binding tariff information classifying the LED bulbs under tariff heading 8543.

### **The Relevant Law**

6. There was no dispute about the relevant principles.

7. Article 20.1 of the Community Customs Code provides for customs duties to be based on the Customs tariff on the EU. Council Regulation 2658/87 sets out in Annex I the combined nomenclature on which the common tariff is based. That nomenclature is comprised of the World Customs Organisation's harmonised system with further EU subdivisions.

8. The combined nomenclature classifies goods under numbered chapters each of which is subdivided into numbered headings; so that, for example, heading 39 in chapter 16 will carry the number 1639. The headings are further subdivided into sub

headings (with a two digit number, eg 40) and sub sub headings (with a further two digit number, eg 10), so that a complete numerical classification might be 1639 40 10. Each heading, sub heading and sub sub heading carries a description.

5 9. Section 1 of Annex 1 contains general rules for interpretation (called GIRs). So far as potentially relevant in this appeal they provide that classification under the combined nomenclature shall be governed by the following principles:

10 1. The titles of sections, chapters and subchapters are for ease of reference only; for legal purposes classification shall be determined according to the terms of the headings and any relative section or chapter notes and, provided such headings or notes do not otherwise require, according to the following provisions:

...

3. When ... for any ... reasons goods are, prima facie classifiable under two or more headings, classification shall be effected as follows:

15 (a) the heading which provides the most specific description shall be preferred to headings providing a more general description ...

20 (b) ... composite goods consisting of different materials or made up of different components ... which cannot be classified by reference to 3 (a), shall be classified as if they consisted of the material or component which gives them their essential character, in so far as this criterion is applicable;

(c) when goods cannot be classified by reference to 3 (a) or (b), they shall be classified under the heading which occurs last in numerical order among those which equally merit consideration.

25 4. Goods which cannot be classified in accordance with the above rules shall be classified under the heading appropriate to the goods to which they are most akin.

...

30 6. For legal purposes, the classification of goods under subheadings of a heading shall be determined according to the terms of those subheadings and any related subheading notes and mutatis mutandis to the above rules, on the understanding that only subheadings at the same level are comparable. For the purposes of this rule the relative section and chapter notes also apply, unless the context otherwise requires."

35 10. We bear in mind two consequences of these rules. First that the rules in GIR 3 apply only where the headings or notes in the nomenclature do not otherwise dictate, and second that GIR 3 applies only if there is more than one heading which is potentially applicable.

40 11. In addition to the rules and the nomenclature there are Explanatory Notes to the world Customs organisation's system, ("HSEs"), and Explanatory Notes produced by the European Commission ("CNENs"). Neither have the force of law but both may be aids to interpretation.

12. The interpretation of the nomenclature, and the approach to be adopted to ascertaining the relevant characteristics of the goods to be classified was explained by the ECJ in Case C - 495/03 *Intermodal transports BV v Staatssecretaris van Financier*, where it said:

5 "[47] According to settled to case law, in the interests of legal certainty and ease of verification, the decisive criteria for the classification of goods for customs purposes is in general to be found in their objective characteristics and properties as defined in the wording of the relevant CN and of the notes to the sections or chapters.",

10 and, later in the same case at [55]:

"According to the court's case law, the intended use of a product may constitute an objective criterion in relation to the tariff classification if it is inherent in the product, and such inherent character must be capable of being assessed on the basis of the product's objective characteristics and properties ..."

### 15 **The Possible Classifications**

13. Four possible classifications of the LED bulbs were canvassed before us. We consider first in relation to each suggested heading whether, leaving aside the possible effect of GIR 3 and 4, the LED bulbs can fall under any of those headings.

#### (1). 8539

20 14. The heading reads: "8539 Electric filament or discharge lamps, including sealed beam lamp units and ultraviolet or infrared lamps; arc lamps:"

15. The sub headings under this heading included tungsten halogen lamps and mercury or sodium vapour lamps.

25 16. The CNEN notes say of this heading that with exceptions for certain arc lamps, only lamps and tubes (and parts thereof) fall under this heading, and that "[a]pparatus fitted with such lamps is classified in its appropriate heading, as lighting equipment (heading 9405)" etc.

30 17. The HSEN says that "Electric light lamps consist of glass or quartz containers, of various shapes, containing the necessary elements for converting electrical energy into light rays...".

18. The appellant did not put this classification at the top of its list of preferences. Rightly it said that an LED bulb was not a "filament or discharge lamp". But it argued that if none of the other headings in the nomenclature applied, then since the LED bulbs were mostly akin to those goods which were classified under this heading, they should in those circumstances be classified under it by virtue of GIR 4.

19. We agree that this is the heading appropriate if the LED bulbs cannot be classified in any under any other of the headings canvassed before us.

20. Mr Bedenham asked us to note the use of the word "lamp" in this heading. It is used, he said, throughout the heading to refer to bulbs rather than to complete fittings which may include bulbs. The same appears true of the use of that word in the CNENs and HSENs. We agree with him.

5 (2). 8541

21. The heading reads: "8541 Diodes, transistors and similar semiconductor devices; photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules made up into panels; light emitting diodes; mounted piezoelectric crystals."

10 22. The following subheadings appear

8541 10 00 - Diodes, other than photosensitive or light emitting diodes

8541 21 to 8541 30 specify transistors, thyristors and non light emitting diodes of various types

15 8541 40 - photosensitive semiconductor devices including photovoltaic cells whether or not assembled in modules or made up into panels; light emitting diodes:

8541 40 10 - - light emitting diodes including laser diodes

8541 40 60 - other

8541 50 00 other semiconductor devices

20 8541 60 00 - mounted piezoelectric crystals

23. The HSENs describe light emitting diodes as "devices which convert electrical energy into visible..light..".

24. Mr Bedenham says that the essential characteristic of the LED bulb is the light emitting diode. The bulb is an LED within a casing containing supportive circuitry. It falls within the heading 8541 and either the subheading "40 10 light emitting diodes", or, because of the combination with the chip into " 40 50 other semiconductor devices".

25. Mr Donmall said that the bulb is not simply a light emitting diode. It is a device which contains such a diode. It embodies the cast casing, the printed circuit and covering. As a TV set with a screen composed of the LEDs could not be classified as an LED, neither can this bulb.

26. We note that the chapter heading is divided by semicolons into four categories:

(1) semiconductor devices;

(2) photovoltaic cells including those in panels;

35 (3) LEDs;

(4) mounted pressure sensitive crystals.

27. In (2) and (4), the heading expressly includes more than the semiconductor element which gives the product its essential function: it includes panels containing photovoltaic cells, and the mounting of the piezoelectric crystals. By contrast (1) is limited to the electric component itself: it applies to diodes and similar semiconductor devices - suggesting, not something into which such a device is incorporated, but simply the diode or semiconductor itself ready for incorporation into something else. In the same vein (3) does not include anything other than the diode.

28. Thus it seems to us that the words of 8541 do not extend the heading beyond the electrical components comprised in "diodes transistors and similar semiconductor devices" or "light emitting diodes". Thus such wording excludes anything significant which supports or enhances the function of a light emitting diode.

29. The housing circuitry and covering form part of the LED bulb and are essential to its function. The bulb is not simply a semiconductor device but an assembly which enables the light emitting diodes to be plugged in and to reflect and focus the light it produces. These features are necessary for and consistent with the use of the LED - as a light, not as an electronic component for something else.

30. Thus we conclude that the LED bulbs cannot be classified under this heading.

(3). 8543

31. This heading reads: "8543 electrical machines and apparatus, having individual functions, not specified or included elsewhere."

32. The following subheadings appear:

10 00 particle accelerators

20 00 signal generators

25 30 00 Machines and apparatus for electroplating...

70 - Other machines and apparatus

70 10 Electrical machines with translation or dictionary functions

70 30 -Aerial amplifiers

70 50 -sunbeds, sunlamps...

30 70 60 - Electric fence equipment

70 90 - Other

90 00 Parts

33. The HSEN say that "Most of the appliances of this heading consist of an assembly of electrical goods or parts (valves, transformers, capacitors, chokes, resistors etc) operating wholly electrically. However the heading also includes electrical goods incorporating mechanical features provided that such features are

subsidiary to the electrical function of the machine.” The CNEN contain examples of subheading 70 90 to which we refer below.

5 34. An electrical machine is, to our minds, something which gives rise to discernible movement. Electrical apparatus however encompasses something which does something without necessarily involving such movement. The subheadings (with the exception of parts) appear to reflect that construction.

10 35. The words of the heading require such electrical apparatus to have "individual functions"; that indicates some particular use rather than something which may be used in a large number of different applications as a component. Again the subheadings (with the exception of Parts) reflect that construction.

36. The examples given in the CN Explanatory Notes for 8543 70 90 are consistent with this construction:

1. electrostatic devices
2. electroluminescent devices, generally in the form of strips, plates or panels
- 15 ...
7. Digital flight recorders ...
8. cordless infrared devices for direct control of television receivers ...
- 9 Electric Sound devices used as peripherals for electric guitars. ... these devices are not housed in the guitar casing but are wired between the guitar and the
- 20 power amplifier;
10. electronic reading devices for the visually handicapped

37. The objective characteristics of the LED bulb - its use in a particular place to turn electricity into light - means that it is electrical apparatus. Its purpose is to be plugged in to a particular location to produce light. That is an individual function.

25 38. Thus we conclude that an LED bulb is electrical apparatus with an individual function, and that unless it is “specified or included elsewhere in this chapter” it may fall within 8543 70 90. We have concluded that it does not fall within any of the other candidate headings of chapter 85. Thus it may be classified under 8543 70 90.

(4) 9405.

30 39. This heading reads: "9405 lamps and lighting fittings including searchlights and spotlights and parts thereof, not elsewhere specified or included; illuminated signs, illuminated nameplates and the like, having a permanently fixed light source, and parts thereof not elsewhere specified or included:"

40. The following subheadings appear

35 9405 10 Chandeliers and other electric ceiling or wall lighting fittings ...

[this has a number of subheadings]

9405 20 Electric table, desk, bedside or floorstanding lamps:

[this has a number of subheadings]

9405 30 00 lighting sets of a kind used for Christmas trees

9405 40 - Other electric lamps and lighting fittings

5 this has the following sub subheadings:

10 searchlights and spotlights

Other –

-of plastics

31 of a kind used with filament lamps

10 35 of a kind used with tubular fluorescent lamps

39 other

-of other materials

91 of a kind used as filament lamps

95 of a kind used with tubular fluorescent lamps

15 99 other

9405 50 00 non-electrical lamps and lighting fittings

9405 60 illuminated signs illuminated nameplates

[this has subheadings]

Parts:

20 9405 91 -- -- of glass

10 -- -- -- articles for electrical lighting fittings excluding searchlights and spotlights

90 other

9405 92 - of plastics

25 9405 99 - other”

41. The HSENs say: “Lamps and lighting fittings of this group can...use any source of light. Electrical lamps and lighting fittings of this heading may be equipped with lamp holders, switches, flex and plugs, transformers etc, or, as in the case of fluorescent strip fixture, a starter or a ballast.”; it says that the heading covers in particular:... (3) specialised lamps eg darkroom lamps; ... (4) lamps and light fitting for vehicles...eg headlamps for trains..[but] sealed beam units are classified under heading 8539”. Those notes also contain a description of searchlight or spotlight to which we shall return. The CNENs merely refer to the HSENs description of searchlights and spotlights and the particular examples of para (3) and (4).

35

42. Note 1(f) to Chapter 94 provides:

“ 1. this chapter does not cover

“...(f) lamps or lighting fittings of Chapter 85”.

5 43. Mr Bedenham says:

(1) "lamp" is used in the heading of 9405 is intended to include a bulb as well as a unit which includes, or is capable of including a bulb:

10 (a) this is the natural meaning "lamp" and is so used by bulb manufacturers. He showed us Osram's website which described in many common types of bulb as "lamps";

(b) he referred us to the Webster's dictionary's definition of lamp as:

15 "any of various devices for producing light or sometimes heat: as (1) a vessel with a wick for burning an inflammable liquid (as oil) to produce light (2): a glass bulb or tube that emits light produced by electricity (as an incandescent light bulb or fluorescent lamp)";

and to the Collins dictionary:

"1. a. Any of a number of devices that produce illumination - an electric lamp, a gas lamp an oil lamp,

b. (in combination) lampshade

20 2. a device for holding one or more electric bulbs - a table lamp

and to the Collins American English dictionary

... 2. any various devices producing light or heat, as an electric light bulb or a gas jet ... 3. A holder, stand or based such a device;

25 (c) "lamp" was used in 8539 to include bulbs; a consistent use of the word in the combined nomenclature is to be expected

(d) the subheadings in the chapter, in particular 9405 40 31 use "lamp" to mean both bulb and bulb fitting:

“other electric lamps and light fittings -- of a kind used with filament lamps.”

30 The second use in that heading of “lamps” must be to bulbs.

(2) He referred to the HSEN description allowing such lamps to include lamp holders, switches and flex: that was indicative of “lamp” encompassing the meaning bulb.

44. Thus he says that LED bulbs may fall within the heading.

35 45. Mr Donmall says:

5 (1) In the first phrase of the heading of 9405, “ Lamps and light fittings including searchlights and spotlights and part thereof, not elsewhere specified or included;” it is clear that the words “not elsewhere included refer, because of the position of the comma, to “lamps and light fittings”, rather than just to searchlights and spotlights;

(2) Thus if the bulbs were included in chapter 85 they fall outside 9405;

10 (3) He accepts that “lamp” may mean (i) something which produces light, or (ii) something which holds something which produces light. But he says that he use of “lamp” in the opening words, “lamp or light fittings”, must connote the thing which holds the bulb in order to make sense of 9405 40 31 “other electric lamps – of a kind used with filament lamps”: the first “lamps” must refer to the holders, and the second to the bulbs. And that use of “lamp” must permeate the higher level meaning of “lamp” in the chapter.

15 (4) Further, the subheadings of 9504 indicate the type of “lamp” with which the chapter is concerned: chandeliers, desk lamps etc: they are all holder of, or include, a light emitting source, rather than the source itself.

(5) Note1(f) to Chapter 94 thus effectively makes the same point as the words of exclusion in 9405: anything which is lamp and falls within chapter 85 is not capable of falling within chapter 94.

20 *9405 Our assessment.*

46. We agree with Mr Bedenham that “lamps” is used in the heading of 9405 to include bulbs as well as bulb holders. It seems to us that lamp is used in 8539 to include bulb, and that comparison of meaning at the level of the headings is a surer guide than using the content of subheadings (particularly if added to the HS framework by the EU). That approach also seems to be consistent with GIR 6. Further the use of “lamp” to mean holder rather than bulb in its first use in 9405 40 31 does not seem to us to preclude a wider meaning for the word in the heading. Indeed the inclusion of spotlights in “lamps” suggests that lamps in the heading include bulbs.

47. Thus, were it not for the words of exclusion in 9405 and note 1(f) we would have found that the LED bulbs could have fallen within 9405. That is for the following reasons:

35 (1) Our inspection of the LED bulb showed what appeared to be a convex lens (convex on the side facing the LED and planar on the outside) in the covering at the larger end of the truncated cone. The effect of the lens was to focus the beam of light which came from the bulb. As a result it had the characteristics of a spotlight. We found the description of searchlights of spotlight in the HSEN helpful: “These throw a concentrated beam of light.. over a distance onto a given point or surface, by means of a reflector and lenses, or with a reflector only. ...the lenses are usually planoconvex..”

40 (2) Even if they were not (mini) spotlights, they were lamps, for the reasons set out above.

The effect of the words of exclusion.

48. We note that the words of exclusion in 9405 are different from those in 8543: In 8543 there are excluded those things not specified or included elsewhere *in this chapter*"; in 9405 there are excluded those things "not *elsewhere* or specified or included". Thus the words of the headings themselves impose a hierarchy: if something falls within another heading of chapter 85 then it cannot fall within 8543 or 9405; but if something falls within 8543 or any other heading of chapter 85 then it cannot fall within 9405. That means that if we are correct that the LED bulbs fall within 8543, they cannot fall within 9405 even if the other words of 9405 would otherwise permit it to do so.

49. As a result, whether or not the LED bulbs satisfy the other words of 9405, because of our conclusion that they fall within 8543, they cannot fall in 9405.

50. We reach this conclusion without the benefit of the effect of note 1(f). But it is bolstered by note 1(f). As we have said we agree with Mr Bedenham that "lamp" is used in 9405 to mean both bulb and bulb holder. It seems to us that it must have the same meaning in note 1(f), and that any lamp which is a bulb and falls within chapter 85 is also excluded by that note from chapter 94. In chapter 85 the only heading referring to lamps expressly was 8539 (filament and discharge lamps). For reasons already explained we have concluded that this heading included bulbs of the sort described; as a result filament bulbs fell within chapter 85 and were excluded from chapter 94 by note 1(f) if not otherwise excluded. Thus note 1(f) was capable of excluding bulbs because it excluded those in 8539. Therefore, because that note should be construed so that "lamps" included bulbs, it excludes from chapter 94 any other bulbs which fell within chapter 85.

25 The effect of the GIRs

51. We have striven to give effect to GIR 1 in the analysis above.

52. It was not suggested that GIR 2 had any specific application in this appeal.

53. GIR3 applies only if: (i) by virtue of GIR2, or (ii) for any other reason, goods are potentially classifiable under more than one heading . Because GIR 2 was not applicable that meant that GIR 3 would apply only if there were potentially more than one heading under which the LED bulbs could be classified. But we have concluded that only one of the headings is applicable, namely 8543. As a result GIR 3 has no application.

54. GIR 4 likewise has no application since the LED bulbs can be classified under 8543 (failing which 9405).

55. If we were wrong and the LED bulbs do not fall within 8543 then we would have concluded that they fell within 9405. That conclusion too would have left no scope for the application of GIR 3 or 4.

**Conclusion**

56. The LED bulbs are properly classified as falling within 8543 70 90. The appeal is dismissed.

**Rights of appeal.**

57. This document contains full findings of fact and reasons for the decision. Any party dissatisfied with this decision has a right to apply for permission to appeal against it pursuant to Rule 39 of the Tribunal Procedure (First-tier Tribunal) (Tax Chamber) Rules 2009. The application must be received by this Tribunal not later than 56 days after this decision is sent to that party. The parties are referred to “Guidance to accompany a Decision from the First-tier Tribunal (Tax Chamber)” which accompanies and forms part of this decision notice.

**CHARLES HELLIER  
TRIBUNAL JUDGE**

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**RELEASE DATE: 6 December 2013**